

APPENDIX VIII80. NAVY SHIPBOARD IU INTERFACE

80.1 Scope. This Appendix details the Navy Shipboard IU Interface. The Global Memory allocations used by the Navy Shipboard Application are provided in 80.1.5.

80.1.1 Navy Shipboard IU Functional Interfaces. The Navy Shipboard IU shall interface with Global Memory via the PTB. The following functions located in the Navy Shipboard IU shall interface with Global Memory:

- a. Subscriber Interface Computer Program (SICP)
- b. Digital Voice Ports
- c. 1553B MUX Port
- d. SRA BIT
- e. Support Port

A functional interface block diagram for the Navy Shipboard IU is shown in Figure VIII-1. The details for each functional data interface are described in the following paragraphs.

80.1.1.1 Subscriber Interface Computer Program Interface. The Navy Shipboard SICP shall interface with the IU data ports and the NICP located in the DDP via Global Memory. The SICP shall synchronize data transfer to and from the NICP based upon receipt of a data transfer interrupt from the DDP. The SICP shall then read the input data from all the IU ports and the NICP, and perform the necessary processing to formulate the required outputs.

80.1.1.1.1 SICP/NICP Data Transfer. The data transfer between the SICP and the NICP shall be as specified in 10.1.1.3 of Appendix I.

80.1.1.1.2 Initialization and Status Data Blocks. Terminal Initialization and Status Data Block formats shall be as in Appendices III and IV, with additional information in 80.1.2 and 80.1.3.

80.1.1.2 Digital Voice Port Interface. The Digital Voice Port shall be as specified in 80.1.6.

80.1.1.3 1553B MUX Port Interface. The 1553B MUX Port shall provide the interface between the Host and the Terminal's Global Memory. Communications between the Host and the terminal will utilize a redundant MUX data bus as specified in 80.1.4. The Host will be the bus controller and will issue command words to control the transfer of data between the JTIDS terminal and the Host. Details of the data transfer and data word format shall be as specified in 80.1.4.

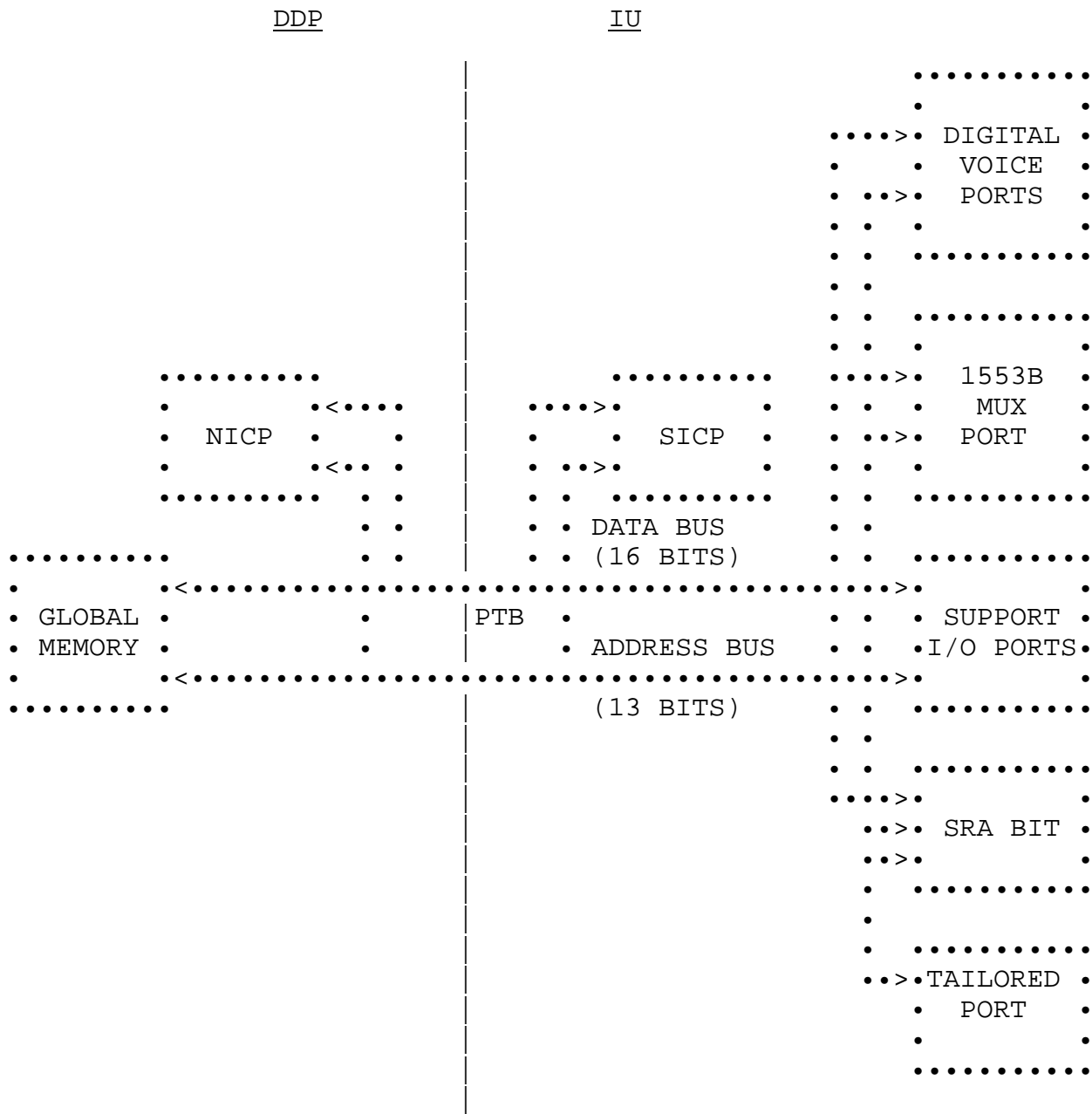


FIGURE VIII-I. NAVY SHIPBOARD INTERFACE UNIT FUNCTIONAL INTERFACE BLOCK DIAGRAM

80.1.1.3.1 MUX Receive Mode.

80.1.1.3.1.1 MUX Receive Memory Allocation. The SICP shall provide the following blocks of memory for use by the 1553B MUX port when operating in the MUX receive mode:

- a. 32 Starting Address Location words
- b. 32 Status/Validity words
- c. 15 Data Buffers (up to 33 words per buffer).

80.1.1.3.1.1.1 Starting Address Words. The MUX Receive Starting Address Words shall contain the starting addresses of up to 32 data buffers corresponding to the possible 32 subaddresses that can be specified in the MUX Bus Command Word. These Starting Address Words shall be stored in contiguous locations in Global Memory. The starting location shall be 0000₁₆. The location of these words shall conform to ND+TRSA where ND=0000₁₆ and TRSA is the value of the subaddress received in the MUX Bus Command Word (for receive T/R = logic 0 and the subaddress is 5 bits in length, 0 to 31).

80.1.1.3.1.1.2 Status/Validity Words. The MUX receive Status/Validity Words shall be provided by the SICP and shall be used by the MUX port to inform the SICP when data is being stored, or that data has been stored in the corresponding data buffer. The starting location for the status/validity words shall be 0100₁₆ and shall conform to NC+TRSA where NC = 0100₁₆ and TRSA is defined in 80.1.1.3.1.1.1. After reading the input buffer, the SICP shall set the corresponding receive status/validity word to FF00₁₆.

80.1.1.3.1.1.3 Receive Data Buffers. The 15 MUX Receive Data Buffers shall be provided by the SICP for use by the MUX port for storing received MUX message blocks. Each MUX Data Buffer shall consist of up to 32 16-bit data words (except for subaddress 17, which can have 33 words, as noted in 80.1.1.3.1.3.1). The data format for each of the received MUX data blocks shall be as specified in 80.1.4.

80.1.1.3.1.2 MUX Receive Mode Operation. The MUX port upon receipt of a valid receive command word from the MUX bus controller, shall write FFFF₁₆ in the status/validity word at location NC+TRSA (as defined in 80.1.1.3.1.1.2) in Global Memory. The MUX port shall then read the receive buffer starting address found at location ND+TRSA (as defined in 80.1.1.3.1.1.1). Upon receipt of the first data word, the MUX port shall write this word into the designated starting address location. The MUX port then increments the starting address pointer by one and writes the second data word into this address location when the data word becomes available. This process continues until all the required data words for the data block have been received. The MUX port then transmits a status word to the bus controller and writes the received bus controller's command word into the status/validity word at location NC+TRSA. If any data word in the block was received in error, the status/validity word shall be set to FF00 by the MUX port. The SICP shall read and check the receive status/validity word prior to reading any receive message buffer. When a FFFF is read (MUX port currently updating data buffer), the SICP shall not attempt to read the data buffer. If FF00 is read, the data block was received in error or the data has already been read by the SICP, and the data should not be used. If a valid command word (See 80.1.4.8.1.1.1) is read in the status/validity word, the SICP shall read the valid data buffer and then set the corresponding status/validity word to FF00. The SICP shall attempt reading subsequent message blocks subject to the status/validity test.

80.1.1.3.1.3 NAV Time Tag. The MUX port, upon receipt of a valid receive command word for Host NAV input data (subaddresses 17) from the MUX bus controller, shall obtain the following slot divider word from Global Memory, which shall be included with the REL NAV input data block.

80.1.1.3.1.3.1 Slot Divider Word. A Slot Divider Word shall be provided by the DDP and shall be accessed by the MUX port via a Port-To-Port data transfer on the PTB upon receipt of a Host NAV input data MUX command. Once read, the MUX port shall store this slot divider word in the input MUX data block currently being received. The location of the slot divider word in the input MUX data block shall correspond to the value of the received command word's word count field plus 1 (virtual word 33 of subaddresses 17). The Port-To-Port address location for the Slot Divider Word shall be $1FF2_{16}$. The format of the Slot Divider Word shall be as follows:

MSB										LSB						ADDRESS LOCATION $1FF2_{16}$
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
										SET		X / Y	SLOT DIVIDER			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-3	SLOT DIVIDER LSB: 7.8125 ms/16
4	SLOT X-Y LOGIC 0 = SLOT DIVIDER IS ACTUAL SLOT TIME LOGIC 1 = SLOT DIVIDER MUST BE CORRECTED BY SUBTRACTING 100 NANOSECONDS
5-6	SET
	BIT 6 • 5 0 • 0 NOT USED 0 • 1 A SET 1 • 0 B SET 1 • 1 C SET
7-15	NOT USED

80.1.1.3.2 MUX Transmit Mode.

80.1.1.3.2.1 MUX Transmit Memory Allocation. The SICP shall provide the following blocks of memory for use by the 1553B MUX port when operating in the MUX transmit mode:

- a. Up to 32 starting address location words
- b. 30 Data Buffers (up to 32 words per buffer).

80.1.1.3.2.1.1 Starting Address Words. The MUX transmit Starting Address Words shall contain the starting addresses of up to 32 data buffers corresponding to the 32 subaddresses that can be specified by the MUX bus controller. These starting address words shall be stored in contiguous locations in Global Memory. The starting location shall be 0020₁₆. The location of these words shall conform to NF+TRSA where NF=0020₁₆ and TRSA is the value of the subaddress received in the MUX bus command word (for transmit T/R= logic 1 and the subaddress is 5 bits in length, 0 to 31).

80.1.1.3.2.1.2 Transmit Data Buffers. The SICP shall maintain up to 30 data buffers which shall contain the latest terminal data that would be available for transmission over the MUX bus when requested by the Host, via the MUX Bus Controller. Each MUX data buffer shall consist of up to 32 16-bit data words. The data format for the MUX transmit data blocks shall be as specified in 80.1.4.

80.1.1.3.2.2 MUX Transmit Mode Operation. The MUX bus controller shall periodically command the IU to transmit data. When the bus controller determines that it has read all IU output data of interest, it shall write a single word to IU MUX receive subaddress 29. Within 50 microseconds of the receipt of a MUX bus Receive Command Word to subaddress 29 the IU shall set the Transmit Command Busy Bit and begin to refresh the transmit buffers. The Transmit Command Busy Bit shall be defined as the Busy Bit sent in Status Word responses to Transmit Commands. Setting of the Transmit Command Busy Bit shall not affect the value of the Busy Bit in Status Word responses to Receive Commands. The IU shall, therefore, be capable of accepting and responding "not busy" to valid MUX bus Receive Commands during transmit buffer refresh. The MUX port shall generate a MUX data transfer complete interrupt (MDTCI) to the SICP. The SICP/MUX PORT shall have up to a maximum of 10 ms to complete the transmit buffer refresh cycle and reset the Transmit Command Busy Bit. In the case where the period between reset of the Transmit Command Busy Bit and receipt of a following refresh command (via subaddress 29) should be less than 10 ms, the length of time between the receipt of the refresh command and the generation of a MUX Data Transfer Complete Interrupt (MDTCI) shall be extended such that the total of these two intervals equals 20 ms.

When a transmit command is received while the Transmit Command Busy Bit is not set, the MUX port shall read the transmit buffer starting address table location which is stored in MUX firmware. The LSBs of the location in which the starting address resides shall correspond to the T/R bit (set to 1 -- transmit) and five sub-address bits received in the MUX bus command word. The IU shall respond with a standard MUX status word followed by the specified number of 16 bit data words.

80.1.1.3.3 MUX Self-test Word. The MUX Self-test word (008A₁₆) is part of the MUX Internal Self-test and is used by the MUX to verify its ability to perform DMA transactions to and from Global Memory. The MUX will write AAAA₁₆ and 5555₁₆ into Global Memory location 008A₁₆ at the following times: 1) at power up or whenever RESET or JRDY are pulsed to logic 0 and back to logic 1, or 2) at the completion of processing a command received over the MIL-STD-1553 Bus.

80.1.1.3.4 MUX Control Word. The MUX Control Word is a single location, 008B₁₆, which contains the Terminal Address for the MUX or specifies that the MUX should obtain its Terminal Address by reading the Hard Wired Address lines. If the Terminal Address bits equal 31 (1F₁₆) the MUX shall determine its terminal address by examining the Hard Wired Address input discretes. In all cases, the terminal address parity bit must provide odd parity for the terminal address value bits.

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 008B ₁₆
										T A P	TERMINAL ADDRESS VALUE					

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-4	TERMINAL ADDRESS VALUE INITIALIZED TO ALL 1's BY THE SICP DURING TERMINAL POWER ON. THIS PATTERN INSTRUCTS THE MUX PORT TO USE ITS HARDWIRED TERMINAL ADDRESS LINES FOR ITS MUX TERMINAL ADDRESS
5	TERMINAL ADDRESS PARITY BIT (TAP)
6-15	NOT USED

80.1.1.3.5 MUX BIT Word. The MUX BIT Word is a single location, 008C₁₆, which contains the results of the MUX Self-test. If Self-test passes, 0000₁₆ is written into the MUX BIT Word location. If the Self-test fails, a non-zero value will be written into the MUX BIT Word location. The SICP should place a non-zero value into the MUX BIT Word location prior to removing the MUX reset discrete.

80.1.1.3.6 MUX Mailbox Words. The MUX Mailbox words (008D₁₆ and 008E₁₆) are part of the MUX Ongoing Built-In Test function. The MUX will periodically write AAAA₁₆ into Global Memory location 008D₁₆ and 5555₁₆ into Global Memory location 008E₁₆ once every 40-60 milliseconds while the MUX remains idle (i.e., no commands are received over the multiplex data bus).

80.1.1.3.7 MUX Firmware Version Word. The MUX during its power up routines will deposit the version of the HIC's microcode firmware into Global Memory location 01F7₁₆.

80.1.1.3.8 Voice Controller Version Word. The Voice Controller during its power up routines will deposit the version of the controller firmware into Global Memory location 01F8₁₆.

80.1.1.4 SRA BIT Interface. The SRA BIT Interface shall provide the interface between the host and the TDMA related functions in the terminal. The interface with Global Memory shall be via the Plain Text Bus. The following SRA BIT Data Word interfaces shall be provided in Global Memory:

- a. Eleven Input Discrete Words
- b. Four Output Discrete Words

80.1.1.4.1 SRA BIT Data Input Words. The SRA BIT shall write the following TDMA Data Input Words into Global Memory:

- a. Input Status Discrete Word 1
- b. Input Discrete Word 2
- c. Input Discrete Word 3
- d. Input BIT Words
- e. BIT Summary Word
- f. 2 Spares

The SRA BIT Interface shall write these words into Global Memory at a rate of one word every 100 milliseconds. The words shall be stored in contiguous locations in Global Memory. The starting location shall be 0095₁₆.

80.1.1.4.1.1 Input Status Discrete Word 1. The format of the Input Status Discrete Word 1 shall be as follows:

MSB															LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 0095 ₁₆
OSC G	PLL G	B I T B		RT T D M A F	L T T I	H P A F	B I T N I T		B S T I	B I T R		M U X G	V 2 G	V 1 G		

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	NOT USED
1	LOGIC 1 = VOICE 1 GOOD (V1G)
2	LOGIC 1 = VOICE 2 GOOD (V2G)
3	LOGIC 1 = MUX GOOD (MUXG)
4	NOT USED
5	LOGIC 1 = POWER SUPPLY 1 GOOD (BIT R)
6	LOGIC 1 = NICAD BATTERY GOOD (BSTI)
7	NOT USED
8	LOGIC 1 = SRA BIT INITIATE WRAP AROUND (BITNIT)
9	LOGIC 1 = HPA FAIL (HPAF)
10	LOGIC 1 = LONG TERM TRANSMIT INHIBIT ON (LTTI)
11	LOGIC 1 = R/T TDMA FAIL (RT TDMAF)
12	NOT USED
13	LOGIC 1 = POWER SUPPLY 2 GOOD (BIT B)
14	LOGIC 1 = PHASE LOCKED LOOP FREQUENCY GOOD (PLLG)
15	LOGIC 1 = OSCILLATOR GOOD (OSCG)

80.1.1.4.1.2 Input Discrete Word 2. The format of the Input Status Discrete Word 2 shall be as follows:

MSB								LSB								ADDRESS LOCATI ON 0096 ₁₆
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
OUTPUT DRIVER STATUS	SPARE							SRA BIT INTERFACE TEST WORD								

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-7	SRA BIT INTERFACE TEST WORD A PATTERN OF 10101010 BINARY SHALL BE WRITTEN ONCE EVERY SLOT PERIOD BY THE TAILORED I/O, DURING NORMAL OPERATION, TO BE USED AS A MAILBOX. THE SICP SHALL PERIODICALLY CLEAR THIS LOCATION. DURING SRA BIT MODE, THIS LOCATION IS NOT UPDATED.
8-14	SPARE
15	TAILORED I/O OUTPUT DRIVER STATUS (TODS) SET TO LOGIC 1 ONLY WHEN ALL OF THE FOLLOWING OUTPUT DRIVER CIRCUITS ARE DETERMINED TO BE FUNCTIONAL: a) JTIDS RECEIVER BLANKING IU OUTPUTS TO THE R/T (JBLINP,JBLINN), b) JTIDS BLANKING OUTPUT AND c) LONGTERM TRANSMIT INHIBIT RELAY DRIVER

80.1.1.4.1.3 Input Discrete Word 3. (Spare)

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 0097 ₁₆

80.1.1.4.1.4 Input BIT Words. The input BIT words are utilized during SRA BIT by the SICP in order to establish pass/fail criteria for the transmit timing and control function (words 1 through 4) and the reference time base function (word 5) within the CTP. The format of Input BIT Words shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION
33RD WORD (LSH)																0098 ₁₆
33RD WORD (MSH)																0099 ₁₆
41ST WORD (LSH)																009A ₁₆
41ST WORD (MSH)																009B ₁₆
3 MHz PULSE COUNT WORD																009C ₁₆

The bit designations shall be as follows:

- WORD 1 0098₁₆
 THE 16 LEAST SIGNIFICANT BITS OF TARY32 DATA SAMPLED DURING THE 33rd GAT64 IN THE SECOND ACTIVE SRA BIT SLOT. SUCCESSFUL OPERATION OF TEST SHALL RESULT IN A DATA PATTERN OF 973E₁₆.
- WORD 2 0099₁₆
 THE 16 MOST SIGNIFICANT BITS OF TARY32 DATA SAMPLED DURING THE 33rd GAT64 IN THE SECOND ACTIVE SRA BIT SLOT. SUCCESSFUL OPERATION OF TEST SHALL RESULT IN A DATA PATTERN OF 3750₁₆.
- WORD 3 009A₁₆
 THE 16 LEAST SIGNIFICANT BITS OF TARY32 DATA SAMPLED DURING THE 41st GAT64 IN THE SECOND ACTIVE SRA BIT SLOT. SUCCESSFUL OPERATION OF TEST SHALL RESULT IN A DATA PATTERN OF 3750₁₆.
- WORD 4 009B₁₆
 THE 16 MOST SIGNIFICANT BITS OF TARY32 DATA SAMPLED DURING THE 41st GAT64 IN THE SECOND ACTIVE SRA BIT SLOT. SUCCESSFUL OPERATION OF TEST SHALL RESULT IN A DATA PATTERN OF 9738₁₆.
- WORD 5 009C₁₆
 NUMBER OF CLOCK CYCLES COUNTED IN THE "SYNREF" SIGNAL (3 MHz CLOCK) WITHIN ONE SLOT PERIOD.

80.1.1.4.1.5 BIT Summary Word. The BIT Summary word is a compilation of the results of the CTP and PTP Self-tests performed during SRA BIT. The SICP utilizes the various inputs in its algorithm for establishing a pass/fail condition for the following functions: PTP (Plain Test Processor); CTP (Cypher Test Processor, bits 0-3); Correlator, Sync Data Detector, Baseband Converter (bits 0-3); CPSM (Continuous Phase Shift Modulation, bit 11); and RTB (Reference Time Base, bit 7). The format of the BIT Summary Word shall be as follows:

MSB															LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATIO N 009D 16
C T P I W	P T P I W			M O D #2	M O D #1	P T B O #2	P T B O #1	E O S G	R / T F W	D D P F W	I U F W	C F L # 4	C F L # 3	C F L # 2	C F L # 1	

The bit designations shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = CFLTI SAMPLE GOOD (DURING CTP & RSED) NO 1 (CFLT1HI)
1	LOGIC 1 = CFLTI SAMPLE GOOD (DURING CTP & RSED) NO 2 (CFLT2LO)
2	LOGIC 1 = CFLTI SAMPLE GOOD (DURING SYNC/DATA TEST) NO 3 (CFLT3HI)
3	LOGIC 1 = CFLTI SAMPLE GOOD (DURING SYNC/DATA TEST) NO 4 (CFLT4LO)
4	IU FAIL INDICATOR WRAPAROUND (IUWRAP)
5	DDP FAIL INDICATOR WRAPAROUND (DPWRAP)
6	R/T FAIL INDICATOR WRAPAROUND (RTWRAP)
7	LOGIC 1 = END OF SLOT FALLS WITHIN WINDOW (EOS G) (BITEHDWGO)
8	LOGIC 1 = PTBO SAMPLE GOOD (DURING PTP TEST) NO 1 (PTBOHI)
9	LOGIC 1 = PTBO SAMPLE GOOD (AFTER PTP TEST) NO 2 (PTBOLO)

<u>BIT</u>	<u>DESIGNATION</u>
10	LOGIC 1 = MOD BIT SAMPLE GOOD (DURING 41ST DATA) NO 1 (MODFLT1)
11	LOGIC 1 = MOD BIT SAMPLE GOOD (DURING 41ST GAP) NO 2 (MODFLT2)
12-13	NOT USED
14	PTP TEST INIT WRAPAROUND (PTP)
15	CTP TEST INIT WRAPAROUND (CTP)

80.1.1.4.1.6 Spare Input BIT Words. (Reserved)

MSB															LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION
																009E ₁₆
																009F ₁₆

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-15	SPARE

80.1.1.4.2 SRA BIT Interface Output Words. The following group of SRA BIT Interface Output Words shall be provided by the SICP and shall be read by the SRA BIT Interface port approximately every 100 milliseconds:

- Output status discrete word 1
- Output discrete word 2
- Output discrete word 3 (Spare)
- Mask word

These words shall be stored in contiguous locations in Global Memory. The starting location shall be 0090₁₆.

80.1.1.4.2.1 Output Status Discrete Word 1. The format of the SRA BIT Interface Output Status Discrete Word 1 shall be as follows:

MSB													LSB			ADDRESS LOCATION 0090 ₁₆
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
C T P I N I T	P T P I N I T		MS T	T M P R		M / S	S R A B I T I N I T	H P A F	R T F	D D P F	I U F	V S T	SPARE		P A B	

The bit designations shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	PORT ACCESS BIT (PAB) LOGIC 1 = GM POINTERS ARE VALID LOGIC 0 = GM POINTERS NOT VALID (DO NOT ACCESS GM)
1-2	SPARE
3	VOICE SELF TEST (VST) LOGIC 1 = VOICE SELF TEST
4	INTERFACE UNIT FAIL (IUF) LOGIC 1 = IU FAIL
5	DIGITAL DATA PROCESSOR FAIL (DDPF) LOGIC 1 = DDP FAIL
6	RECEIVER/TRANSMITTER UNIT FAIL (RTF) LOGIC 1 = R/T FAIL
7	HIGH POWER AMPLIFIER FAIL (HPAF) LOGIC 1 = HPA FAIL
8	SRA BIT INITIATE LOGIC 1 = SRA BIT INITIATE
9	MUX BUSY BIT (M/S) LOGIC 0 = MUX BUSY

<u>BIT</u>	<u>DESIGNATION</u>
10	NOT USED
11	LOGIC 1 = TEMPERATURE OVERRIDE (TMPR)
12	MUX SELF TEST (MST) LOGIC 1 = MUX SELF TEST INITIATE
13	SPARE
14	PTP TEST INITIATE LOGIC 1 = PTP TEST INITIATE
15	CTP TEST INITIATE LOGIC 1 = CTP TEST INITIATE

80.1.1.4.2.2 Output Discrete Word 2.

MSB												LSB				ADDRESS LOCATION 0091 ₁₆
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
												VRS2		VRS1		

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-1	VOICE RATE SELECT PORT 1 (VRS1)
	BIT 1 • 0 • • • • • 1 • 1 16 KBPS - CVSD OTHER VALUES NOT USED BY NAVY
2-3	VOICE RATE SELECT PORT 2 (VRS2)
	BIT 3 • 2 • • • • • 1 • 1 16 KBPS - CVSD OTHER VALUES NOT USED BY NAVY
4-15	NOT USED

80.1.1.4.2.3 Output Discrete Word 3. (Spare)

ADDRESS LOCATION 0092. (SEE 90.1.1.4.2.3)

80.1.1.4.2.4 Output Discrete Word 4 (Mask Word). The format of the Tailored Interface Output Discrete Word 4 shall be as follows:

MSB															LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 0093 ₁₆
	A R Y T E N				B D A 8	B D C H		B D 0 7	B D 0 6						B D 0 0	

WHEN ANY OF THE FOLLOWING BITS ARE SET TO A LOGIC 1 STATE, (BITS 0 THROUGH 10), ACCESS TO GLOBAL MEMORY VIA THE PLAIN TEXT BUS SHALL BE DISABLED FOR THAT PORT. THIS FEATURE IS USED ONLY FOR TESTING AND DEBUGGING PURPOSES.

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = 1553B MUX DISABLE ACCESS TO GLOBAL MEMORY (BD00)
1-3	NOT USED
4	SPARE
5	SPARE
6	LOGIC 1 = PTP DISABLE ACCESS TO GLOBAL MEMORY (BD06)
7	LOGIC 1 = VOICE 1/2 DISABLE ACCESS TO GLOBAL MEMORY (BD07)
8	NOT USED
9	LOGIC 1 = CHRONOMETER DISABLE (BDCH)
10	LOGIC 1 = REFERENCE TIME BASE DISABLE(BDA8)

<u>BIT</u>	<u>DESIGNATION</u>
11	SPARE
12	NOT USED
13	NOT USED
14	LOGIC 1 = ENABLES DIGITAL LOOPBACK TEST WITHIN THE DDP
15	SPARE

80.1.1.5 Support Port Interface. The Support Port Interface shall be as specified in 80.1.6.1.3.

80.1.2 Navy Shipboard and Navy Airborne Useage of Appendix III. This section contains the changes for Navy Shipboard and Navy Airborne against Appendix III.

80.1.2.1 Initialization Data Block 0.

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CHECKSUM															
wd 2	CONTROL WORD															
wd 3	LOAD COMMAND AND BLOCK COUNT															
wd 4	PLATFORM IDENTIFIER															
wd 5	NOT USED															
wd 6	NOT USED															
wd 7	NOT USED															
wd 8	NOT USED															
wd 9	NOT USED															
wd 10	NOT USED															
wd 11	NOT USED															
wd 12	NOT USED															
wd 13	NOT USED															
wd 14	NOT USED															
wd 15	NOT USED															
wd 16	NOT USED															
wd 17	NOT USED															
wd 18	NOT USED															
wd 19	NOT USED															
wd 20	NOT USED															
wd 21	NOT USED															
wd 22	NOT USED															
wd 23	NOT USED															
wd 24	NOT USED															
wd 25	NOT USED															
wd 26	NOT USED															
wd 27	NOT USED															
wd 28	NOT USED															
wd 29	NOT USED															
wd 30	NOT USED															
wd 31	NOT USED															
wd 32	NOT USED															

NAVY ONLY - INITIALIZATION BLOCK 0

80.1.2.1.1 Platform Identifier. (Block 0, Word 4) If "NO STATEMENT" is input with a LOAD COMMAND (Block 0, Word 3) of "RESTART: USE CURRENT DATA", then previously entered Platform Identifier will be used by the Terminal (see 80.1.4.6.1.1 and 80.1.4.6.1.2).

MSB											LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 4												PLATFORM IDENTIFIER				

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>										
0-4	PLATFORM IDENTIFIER										
	BIT	4	.	3	.	2	.	1	.	0	
		
		0	.	0	.	0	.	0	.	0	NO STATEMENT
		0	.	0	.	0	.	0	.	1	E-2C (NAVY AIR)
		0	.	0	.	0	.	1	.	0	F-14D (NAVY AIR)
		0	.	0	.	0	.	1	.	1	ALL NAVY SHIP PLATFORMS
	OTHER VALUES RESERVED FOR FUTURE GROWTH.										

80.1.2.2 Initialization Data Block 1.

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CHECKSUM (SEE 30.4.1.1)															
wd 2	CONTROL WORD FOR INITIALIZATION BLOCK 1 (SEE 30.4.1.2)															
wd 3	RF MODE															
wd 4	PRIMARY TRACK NUMBER															
wd 5	TERMINAL FUNCTION WORD 1															
wd 6	TERMINAL FUNCTION WORD 2															
wd 7	TERMINAL FUNCTION WORD 3															
wd 8	STATION POSITION LAT (COARSE)															
wd 9	STATION POSITION LAT (FINE)															
wd 10	STATION POSITION LONG (COARSE)															
wd 11	STATION POSITION LONG (FINE)															
wd 12	HOST PLATFORM ANTENNA HEIGHT															
wd 13	POSITION UNCERTAINTY/STATION POSITION VALIDITY WORD															
wd 14	REFERENCE GRID ORIGIN LAT (COARSE)															
wd 15	REFERENCE GRID ORIGIN LAT (FINE)															
wd 16	REFERENCE GRID ORIGIN LONG (COARSE)															
wd 17	REFERENCE GRID ORIGIN LONG (FINE)															
wd 18	REFERENCE GRID ID (RESERVED)															
wd 19	DEFAULT NET NUMBER															
wd 20	DEFAULT VARIABLES															
wd 21	SDU VARIABLE CODE WORD 1															
wd 22	SDU VARIABLE CODE WORD 2															
wd 23	SDU VARIABLE CODE WORD 3															
wd 24	SDU VARIABLE CODE WORD 4															
wd 25	TRANSMIT ANTENNA CABLE DELAY															
wd 26	DIGITAL VOICE															
wd 27	ETR CABLE DELAY															
wd 28	R/T-DDP AND ANTENNA A CABLE DELAYS															
wd 29	ANTENNA B CABLE DELAY															
wd 30	NOT USED															
wd 31	NOT USED															
wd 32	LOOPBACK DELAY VALUE															

NAVY ONLY - INITIALIZATION BLOCK 1

80.1.2.2.1 RF Mode Word. (Block 1, Word 3)

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 3	R C V	TEST		XMIT			RCV ANT CONF		H P A P	EOC		IPF OVER		R A N G E	COMM MODE	

NOTE: FOR HPA HIGH POWER TRANSMISSION, THE EOC (BITS 5-6 OF THIS WORD) MUST BE SET "EXCITER OUT J8", THE IPF OVERRIDE (BITS 3-4 OF THIS WORD) SET TO "EXERCISE" OR "COMBAT", THE HPA POWER VARIABLE (BITS 10-12 OF WORD 5) SET TO "HIGH POWER MODE", PLATFORM TRANSMIT TYPE (BITS 7-8 OF WORD 7) SET TO "SINGLE ANT XMIT WITH DELAY ELEMENTS BEYOND R/T", THE LOOPBACK PATH (BIT 9 OF WORD 7) SET TO "LOOPBACK BEYOND R/T" AND XMIT ANTENNA (BITS 4-5 OF INITIALIZATION BLOCK 63, WORD 3) SET TO "ANTENNA B". FOR HPA LOW POWER TRANSMISSION, ALL OF THE ABOVE REQUIREMENTS HOLD, EXCEPT THAT THE IPF OVERRIDE MAY TAKE ANY VALUE, INCLUDING OFF, AND THE HPA OUTPUT LEVEL VARIABLE WOULD BE "LOW POWER MODE".

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-1	COMMUNICATIONS MODE
BIT 1 • 0	
• • • • •	
0 • 0	NOT USED
0 • 1	MODE 1 - DEFAULT VALUE
1 • 0	MODE 2
1 • 1	MODE 4 - FOR TEST ONLY - NOT TO BE USED OPERATIONALLY

- NOTES: 1. FOR NAVY AIR ONLY, MODE 4 CAN BE ENABLED BY SETTING THE COMMUNICATIONS MODE TO "MODE 4" AND THE "MODE 4 ENABLED" DISCRETE (SEE 90.1.1.4.1.1, BIT 7) MUST BE ENABLED. THIS IS USED FOR TEST PURPOSES ONLY.
2. FOR NAVY SHIP ONLY, MODE 4 CAN BE ENABLED, ONLY WITH HARDWARE MODIFICATIONS TO THE TERMINAL, WHICH IS BEYOND THE SCOPE OF THIS ICD, AND IS USED FOR TEST PURPOSES ONLY.

BIT DESIGNATION

3-4 INTERFERENCE PROTECTION FEATURE OVERRIDE (IPF)

BIT	4	.	3	
		.	.	.
	0	.	0	OFF, 40/20 RULE - DEFAULT VALUE
	0	.	1	EXERCISE
	1	.	0	COMBAT
	1	.	1	OFF, 100/50 RULE

NOTE: COMPLETE VALIDITY CHECKING/ACCEPTANCE OF OTHER PARAMETERS WHICH DEPEND ON IPF OVERRIDE STATUS IS NOT PERFORMED WHEN THIS VARIABLE IS ENTERED AS A DATA CHANGE. TO AVOID PROBLEMS, A "RESTART LOAD: USE CURRENT DATA" (SEE 30.4.1.3) IS REQUIRED TO ACTIVATE VALIDITY CHECKING. FURTHERMORE, OPERATIONAL STATUS OF VOICE CHANNELS THAT MAY BE AFFECTED BY THIS PARAMETER SHOULD BE VERIFIED BY A HOST REQUEST (SEE 80.1.4.6.1.1 AND 80.1.4.8.1.6.2.1) FOR STATUS BLOCK 3 (SEE 40.5.3).

5-6 EXCITER OUTPUT CONTROL (EOC)

BIT	6	.	5	<u>NAVY AIR ONLY</u>
		.	.	.
	1	.	0	EXCITER OUT OFF; R/T PA HIGH POWER
		.		(200 WATTS) - F-14D DEFAULT
	1	.	1	EXCITER OUT J8-TDMA ONLY: R/T PA
		.		TRANSMIT TACAN (500 WATTS)
		.		- E-2C DEFAULT

BIT	6	.	5	<u>NAVY SHIP ONLY</u>
		.	.	.
	1	.	0	EXCITER OUT OFF; R/T PA HIGH POWER
		.		(200 WATTS) (R/T EMERGENCY TRANSMIT
		.		MODE ONLY)
	1	.	1	EXCITER OUT J8-TDMA ONLY: R/T PA
		.		OFF - DEFAULT VALUE

OTHER VALUES ARE NOT USED BY NAVY.

NOTE: THIS VARIABLE MUST BE SET TO "EXCITER OUT OFF" WHEN AN HPA IS NOT PRESENT (SEE BIT 7 OF THIS WORD) AND TO "EXCITER OUT J8" WHEN AN HPA IS PRESENT.

BIT DESIGNATION

7 HPA PRESENT (HPAP)

NAVY AIR ONLY

LOGIC 1 = HPA PRESENT - E-2C DEFAULT

LOGIC 0 = HPA NOT PRESENT - F-14D DEFAULT

NAVY SHIP ONLY

LOGIC 1 = HPA PRESENT (DEFAULT VALUE)

LOGIC 0 = HPA NOT PRESENT (R/T EMERGENCY TRANSMIT MODE ONLY)

8-9 RECEIVE ANTENNA CONFIGURATION (RCV ANT CONF)

BIT 9 • 8 NAVY AIR ONLY

• • • • •

0 • 0 DUAL ANTENNA - DEFAULT VALUE

0 • 1 ANTENNA A

1 • 0 ANTENNA B

1 • 1 NOT USED

BIT 9 • 8 NAVY SHIP ONLY

• • • • •

0 • 0 DUAL ANTENNA - DEFAULT VALUE

0 • 1 ANTENNA A (RECEIVE-ONLY)

1 • 0 ANTENNA B (TRANSMIT/RECEIVE)

1 • 1 NOT USED

BIT DESIGNATION

10-12 TDMA TRANSMISSION MODE (XMIT)

BIT	12	•	11	•	10	
	•	•	•	•	•	
	0	•	0	•	0	TDMA OFF
	0	•	0	•	1	NORMAL - DEFAULT VALUE FOR
			•			NAVY SHIP
	0	•	1	•	0	POLLING
	1	•	0	•	0	DATA SILENT - DEFAULT VALUE
			•			FOR NAVY AIR
	1	•	1	•	1	RESERVED FOR INTERNAL
						NICP/SICP USE

THE OTHER VALUES ARE NOT USED.

- NOTES: 1) THE NAVY AIR IU WILL RESPOND TO THE SETTING OF THIS VARIABLE ONLY IF NEITHER NORMAL, POLLING NOR DATA SILENT IS SELECTED VIA DISCRETE INPUT (SEE 90.1.1.4.1.4, BITS 3-5).
- 2) IF LTTI IS ENABLED (SEE 80.1.2.14.8), THIS VARIABLE SIGNIFIES THE TRANSMISSION MODE THE TERMINAL WILL USE WHEN LTTI IS DISABLED.

15 RECEIVE MODE (RCV)
LOGIC 0 = NORMAL RECEIVE - FIXED VALUE IN NAVY USE

80.1.2.2.2 Terminal Function Word 1. (Block 1, Word 5)

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 5	RF LOOPBACK CONTROL			HPA OUTPUT LEVEL			I P	1 0 R/T CONF		R F O	P O L	N T R	P R	NAV		

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
7-8	R/T RECEIVER CONFIGURATION (R/T CONF)
BIT 8 • 7 •••••••• 1 • 0	EIGHT (8) RECEIVER NAVY CONFIGURATION (DEFAULT)
	THE OTHER VALUES ARE NOT USED BY NAVY
9	INPUT PRIORITY (IP) - <u>NAVY AIR ONLY</u> LOGIC 0 = TERMINAL RESPONDS TO LAST RECEIVED INPUT FOR THOSE INPUTS THAT CAN ARRIVE EITHER AS INITIALIZATION DATA (VIA TIM 1 - SEE 80.1.4.6.1) OR CONTROL DATA (VIA TIM 16 - SEE 80.1.4.6.6) OR VIA A DISCRETE - DEFAULT VALUE LOGIC 1 = TERMINAL RESPONDS TO DISCRETES ONLY NOT USED BY NAVY SHIP
10-12	HPA OUTPUT LEVEL
BIT 12 • 11 • 10 •••••••••••••• 0 • 0 • 0 0 • 0 • 1 0 • 1 • 0	<u>NAVY AIR ONLY</u> HPA OFF - F-14D DEFAULT HIGH POWER MODE (1260 WATTS) LOW POWER MODE - E-2C DEFAULT
BIT 12 • 11 • 10 •••••••••••••• 0 • 0 • 0 • • • 0 • 0 • 1 0 • 1 • 0	<u>NAVY SHIP ONLY</u> HPA OFF (R/T EMERGENCY TRANSMIT MODE) HIGH POWER MODE LOW POWER MODE - DEFAULT VALUE
	THE OTHER VALUES ARE NOT USED BY NAVY.

NAVY ONLY - INITIALIZATION BLOCK 1

BIT DESIGNATION

13-15 RF LOOPBACK CONTROL

```

BIT    15   •   14   •   13
      .....
      0   •   0   •   0   R/T MODE - DUAL;
          •       •     DDP MODE - DUAL;
          •       •     FOR NAVY AIR ONLY - FIXED
          •       •     FOR NAVY SHIP ONLY - R/T EMERGENCY
          •       •     TRANSMIT MODE
          •       •
      0   •   1   •   1   R/T MODE - SINGLE (PORT B);
          •       •     DDP MODE - SINGLE
          •       •     NAVY SHIP ONLY - DEFAULT

```

NAVY ONLY - INITIALIZATION BLOCK 1

80.1.2.2.3 Terminal Function Word 2. (Block 1, Word 6)

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 6						O T M D				C C P D	SEQ			N E T E	E T R	T R P

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	TAPE RECORDER PORT SELECTION (TRP) LOGIC 1 = TSRD - DEFAULT VALUE FOR NAVY AIR LOGIC 0 = MUX (HOST) - DEFAULT VALUE FOR NAVY SHIP
2	NET ENTRY TRANSMIT ENABLE (NETE)
	<u>NAVY AIR ONLY</u> LOGIC 1 = TRANSMIT NET ENTRY MESSAGE - DEFAULT VALUE FOR E-2C LOGIC 0 = DO NOT TRANSMIT NET ENTRY MESSAGE - DEFAULT VALUE FOR F-14D
	<u>NAVY SHIP ONLY</u> LOGIC 1 = TRANSMIT NET ENTRY MESSAGE LOGIC 0 = DO NOT TRANSMIT NET ENTRY MESSAGE - DEFAULT VALUE

80.1.2.2.4 Terminal Function Word 3. (Block 1, Word 7)

MSB														LSB		
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 7							P A T H	XMIT TYPE		STRENGTH				PLATFORM TYPE		

The bit designation shall be as follows:

BIT DESIGNATION

0-2 PLATFORM TYPE

```

BIT    2 . 1 . 0      NAVY AIR ONLY
.....
      0 . 1 . 0      AIR - DEFAULT VALUE
      0 . 1 . 1      SURFACE (FOR TEST ONLY)
      1 . 0 . 1      GROUND POINT (FOR TEST ONLY)

BIT    2 . 1 . 0      NAVY SHIP ONLY
.....
      0 . 1 . 1      SURFACE - DEFAULT
      1 . 0 . 1      GROUND POINT (FOR TEST ONLY)

```

OTHER VALUES ARE NOT USED.

3-6 STRENGTH

```

BIT    6 . 5 . 4 . 3
.....
      0 . 0 . 0 . 0      NO STATEMENT
      0 . 0 . 0 . 1      1 UNIT - DEFAULT VALUE
      0 . 0 . 1 . 0      2 UNITS
      0 . 0 . 1 . 1      3 UNITS
      0 . 1 . 0 . 0      4 UNITS
      0 . 1 . 0 . 1      5 UNITS
      0 . 1 . 1 . 0      6 UNITS
      0 . 1 . 1 . 1      7 UNITS
      1 . 0 . 0 . 0      8 UNITS
      1 . 0 . 0 . 1      9 UNITS
      1 . 0 . 1 . 0      10 UNITS
      1 . 0 . 1 . 1      11 UNITS
      1 . 1 . 0 . 0      12 UNITS
      1 . 1 . 0 . 1      2-7 (FEW UNITS)
      1 . 1 . 1 . 0      > 7 (MANY) UNITS
      1 . 1 . 1 . 1      > 12 UNITS

```

BIT DESIGNATION

7-8 PLATFORM TRANSMIT TYPE (XMIT TYPE). CABLE DELAY
CONFIGURATION.

```

BIT      8 . 7
        .....
        0 . 0   NO DELAYS BEYOND R/T
            .    OTHER THAN CABLE AND ANTENNA
            .    - F-14D DEFAULT
            .    NAVY SHIP ONLY - R/T
        .      EMERGENCY TRANSMIT MODE
            .
        0 . 1   SINGLE ANTENNA XMIT WITH DELAY
            .    ELEMENTS BEYOND R/T - SHIPBOARD
            .    AND E-2C DEFAULT
        1 . 0   NOT USED BY NAVY
        1 . 1   NOT USED

```

NOTE: XMIT ANTENNA CONFIGURATION IS DEFINED IN INITIALIZATION BLOCK
63, WORD 3 (SEE 80.1.2.21.1)

9 LOOPBACK PATH (PATH). LOOPBACK TOA DELAY CONFIGURATION
NAVY AIR ONLY
LOGIC 0 = NO LOOPBACK BEYOND R/T (F-14D DEFAULT)
LOGIC 1 = LOOPBACK BEYOND R/T - USE LOOPBACK DELAY
 IN BLOCK 1, WORD 32 (E-2C DEFAULT)
NAVY SHIP ONLY
LOGIC 0 = NO LOOPBACK BEYOND R/T (R/T EMERGENCY TRANSMIT
MODE ONLY)
LOGIC 1 = LOOPBACK BEYOND R/T - USE LOOPBACK DELAY
 IN BLOCK 1, WORD 32 (DEFAULT VALUE)

10-15 NOT USED

NAVY ONLY - INITIALIZATION BLOCK 1

80.1.2.2.5 Station Position Latitude. (Block 1, Words 8 and 9)

MSB													LSB			
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 8 (COARSE)	M S B STATION LATITUDE															
wd 9 (FINE)	STATION LATITUDE								L S B							

The bit designation shall be as follows:

WORD 8

<u>BIT</u>	<u>DESIGNATION</u>
0-15	16 MSB'S OF 24-BIT STATION LATITUDE (WGS-72) (IN BAM SEE TABLE IV-III). REMAINING 8 BITS ARE LOCATED IN STATION LATITUDE (FINE) WORD.

WORD 9

<u>BIT</u>	<u>DESIGNATION</u>
0-7	NOT USED
8-15	8 LSB'S OF 24-BIT STATION LATITUDE IN BAM. REMAINING 16 BITS ARE LOCATED IN STATION LATITUDE (COARSE) WORD.

80.1.2.2.6 Station Position Longitude. (Block 1, Words 10 and 11)

MSB													LSB				
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 10 (COARSE)	M S B STATION LONGITUDE																
wd 11 (FINE)	STATION LONGITUDE								L S B								

The bit designation shall be as follows:

WORD 10BITDESIGNATION

0-15

16 MSB'S OF 24-BIT STATION LONGITUDE (WGS-72) IN BAM.
REMAINING 8 BITS ARE LOCATED IN STATION LONGITUDE
(FINE) WORD.

WORD 11BITDESIGNATION

0-7

NOT USED

8-15

8 LSB'S OF 24-BIT STATION LONGITUDE IN BAM. REMAINING
16 BITS ARE LOCATED IN STATION LONGITUDE (COARSE)
WORD.

80.1.2.2.7 Position Uncertainty/Station Position Validity Word. (Block 1, Word 13). The uncertainty in the position and height reported in Block 1, Words 8 thru 12, or for Navy Air Only in the position and height reported in TIM 17.

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 13	V						Hu					Pu				

The bit designation shall be as follows:

BITDESIGNATION

5-9

HEIGHT UNCERTAINTY (Hu), CODING: 0-31

DEFINITION: One-sigma uncertainty in Height. A value of 0 signifies that uncertainty is greater than 60,000 feet - default value for Navy Air. Values 1 thru 31 - reported value is the greatest number for which $60,000 * (1.575^{(1-Hu)})$ feet is greater than or equal to the height uncertainty. (See Table III-I for correspondence between Hu and height uncertainty.) Default value for Navy Ship is 17 (# 41.8 feet).

NAVY ONLY - INITIALIZATION BLOCK 1

80.1.2.2.8 Reference Grid Origin Latitude. (Block 1, Words 14 and 15)

MSB																LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 14 (COARSE)	M S B REFERENCE GRID ORIGIN LATITUDE																
wd 15 (FINE)	REFERENCE GRID ORIGIN LATITUDE								L S B								

The bit designation shall be as follows:

WORD 14

<u>BIT</u>	<u>DESIGNATION</u>
0-15	16 MSB'S OF 24-BIT REFERENCE GRID ORIGIN LATITUDE (WGS-72) (IN BAM, SEE TABLE IV-III). REMAINING 8 BITS ARE LOCATED IN REFERENCE GRID ORIGIN LATITUDE (FINE) WORD

80.1.2.2.9 Reference Grid Origin Longitude. (Block 1, Words 16 and 17)

	MSB																LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0								
wd 16 (COARSE)	M S B																REFERENCE GRID ORIGIN LONGITUDE							
wd 17 (FINE)	REFERENCE GRID ORIGIN LONGITUDE								L S B															

The bit designation shall be as follows:

WORD 16

<u>BIT</u>	<u>DESIGNATION</u>
0-15	16 MSB'S OF 24-BIT REFERENCE GRID ORIGIN LONGITUDE (WGS-72) (IN BAM). REMAINING 8 BITS ARE LOCATED IN REFERENCE GRID ORIGIN LONGITUDE (FINE) WORD

80.1.2.2.10 Default Variables. (Block 1, Word 20)

NOTE: COMPLETE VALIDITY CHECKING/ACCEPTANCE OF OTHER PARAMETERS WHICH DEPEND ON THESE PARAMETERS IS NOT PERFORMED WHEN ONE OF THESE VARIABLES IS ENTERED AS A DATA CHANGE. TO AVOID PROBLEMS, A "RESTART LOAD: USE CURRENT DATA" (SEE 30.4.1.3) IS REQUIRED TO ACTIVATE VALIDITY CHECKING. FURTHERMORE, OPERATIONAL STATUS OF VOICE CHANNELS THAT MAY BE AFFECTED BY THESE PARAMETERS SHOULD BE VERIFIED BY A HOST REQUEST (SEE 80.1.4.6.6.1 AND 80.1.4.8.1.6.2.1) FOR STATUS BLOCK 3 (SEE 40.5.3).

MSB									LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 20		DEFAULT TSEC								DEFAULT MSEC						

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-6	DEFAULT MSEC VARIABLE 0 = NO STATEMENT (USE COMMON MODE) 1-127 = ASSIGNED MSEC DEFAULT VALUE = 0

NOTE: DEFAULT MSEC = 0 IS "NO STATEMENT" AND INDICATES DEFAULT TO THE COMMON VARIABLE MODE. SELECTION OF PARTITIONED VARIABLE MODE FOR DEFAULT RECEPTION IS CURRENTLY NOT IMPLEMENTED.

8-14	DEFAULT TSEC VARIABLE 1-127 = ASSIGNED TSEC 0 IS AN ILLEGAL VALUE DEFAULT VALUE = 1 (CVLL-1)
------	---

NOTE: IF THE DEFAULT TSEC VARIABLE DOES NOT MATCH ONE OF THE CURRENT (PER CRYPTO PERIOD DESIGNATOR) VARIABLE CODES AMONG THE SDU VARIABLE CODE WORDS (SEE 80.1.2.2.11), THEN SDU MEMORY LOCATION 0 IS USED FOR IT.

NAVY ONLY - INITIALIZATION BLOCK 1

80.1.2.2.11 SDU Variable Code Words. (Block 1, Words 21 through 24) (4 words) variable code for 8 variable locations

NOTE: COMPLETE VALIDITY CHECKING/ACCEPTANCE OF OTHER PARAMETERS WHICH DEPEND ON THESE PARAMETERS IS NOT PERFORMED WHEN ONE OF THESE VARIABLES IS ENTERED AS A DATA CHANGE. TO AVOID PROBLEMS, A "RESTART LOAD: USE CURRENT DATA" (SEE 30.4.1.3) IS REQUIRED TO ACTIVATE VALIDITY CHECKING. FURTHERMORE, OPERATIONAL STATUS OF VOICE CHANNELS THAT MAY BE AFFECTED BY THESE PARAMETERS SHOULD BE VERIFIED BY A HOST REQUEST (SEE 80.1.4.6.6.1 AND 80.1.4.8.1.6.2.1) FOR STATUS BLOCK 3 (SEE 40.5.3).

MSB									LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 21 - 24	CPD	VARIABLE CODE FOR LOC N + 1							CPD	VARIABLE CODE FOR LOC N						

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-6	VARIABLE CODE FOR LOCATION N 0 = NO STATEMENT 1-127 = ASSIGNED VARIABLE CODE DEFAULT VALUE = 1 FOR LOCATION 0 DEFAULT VALUE = 0 FOR OTHER LOCATIONS

NAVY ONLY - INITIALIZATION BLOCK 1

80.1.2.2.12 Transmit Antenna Cable Delay Value. (Block 1, Word 25)

MSB									LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 25	TRANSMIT ANTENNA B CABLE DELAY VALUE								TRANSMIT ANTENNA C CABLE DELAY VALUE							

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-7	TRANSMIT ANTENNA C CABLE DELAY - <u>NAVY AIR ONLY</u> LSB: 12.5 NANOSECONDS RANGE: 0 TO 3187.5 NANOSECONDS
8-15	TRANSMIT ANTENNA B CABLE DELAY VALUE - <u>NAVY SHIP ONLY</u> LSB: 12.5 NANOSECONDS RANGE: 0 TO 3187.5 NANOSECONDS THIS VALUE IS A "DON'T CARE" UNLESS PLATFORM TRANSMIT TYPE (BLOCK 1, WORD 7, BITS 7-8) IS SET TO "SINGLE ANTENNA TRANSMIT WITH DELAY ELEMENTS BEYOND R/T".

NAVY ONLY - INITIALIZATION BLOCK 1

80.1.2.2.13 Digital Voice Word. (Block 1, Word 26)

MSB												LSB				
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 26					C2 0	VR2 0 0							C 1 0	VR1 0 0		V C H A N

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	VOICE CHANNELIZATION (VCHAN) LOGIC 1 = VOICE A - PORT 2, VOICE B - PORT 1 LOGIC 0 = VOICE A - PORT 1, VOICE B - PORT 2 - DEFAULT VALUE
1-2	VOICE PORT 1 RATE (VR 1) BIT 2 • 1 ••••••• 0 • 0 16 KBPS - FIXED VALUE IN NAVY USE • (DEFAULT)
3	PORT 1 CODED VOICE (C1) LOGIC 0 = UNCODED VOICE - FIXED VALUE IN NAVY USE (DEFAULT)
4-5	NOT USED BY NAVY
6-8	SPARE
9-10	VOICE PORT 2 RATE (VR2) SAME CODING AS VOICE PORT 1 RATE.
11	PORT 2 CODED VOICE (C2) SAME CODING AS PORT 1 CODED VOICE.
12-15	SPARE

NAVY ONLY - INITIALIZATION BLOCK 1

80.1.2.2.14 R/T-DDP and Antenna A Cable Delays. (Block 1, Word 28)

	MSB									LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 28	R/T TO DDP CABLE DELAY								ANTENNA A CABLE DELAY								

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-7	ANTENNA A CABLE DELAY. (TRUNCATED TO 12.5 NANOSECONDS) LSB: 12.5 NANOSECONDS RANGE: 0 TO 3187.5 NANOSECONDS DEFAULT VALUE FOR F-14D: 50 NANOSECONDS (= 04 ₁₆) <u>NAVY SHIP ONLY</u> - ANTENNA A IS THE RECEIVE-ONLY ANTENNA. SEE 3.2.5.2 IN Y207A135 FOR ANTENNA DESCRIPTION. THIS VALUE IS A "DON'T CARE" UNLESS PLATFORM TRANSMIT TYPE (BLOCK 1, WORD 7, BITS 7-8) IS SET TO "NO DELAYS BEYOND R/T".
8-15	CABLE DELAY R/T TO DDP (TRUNCATED TO 12.5 NANOSECONDS) LSB: 12.5 NANOSECONDS RANGE: 0 TO 3187.5 NANOSECONDS DEFAULT VALUE FOR F-14D: 25 NANOSECONDS (= 02 ₁₆)

NAVY ONLY - INITIALIZATION BLOCK 1

80.1.2.2.15 Antenna B Cable Delay. (Block 1, Word 29)

Same format as Antenna A Cable Delay except bits 8 through 15 are not used.

DEFAULT VALUE FOR F-14D: 87.5 NANOSECONDS (= 07₁₆)

NAVY SHIP ONLY - ANTENNA B IS THE TRANSMIT/RECEIVE ANTENNA. SEE 3.2.5.2 IN Y207A135 FOR ANTENNA DESCRIPTION. THIS VALUE IS A "DON'T CARE" UNLESS PLATFORM TRANSMIT TYPE (BLOCK 1, WORD 7, BITS 7-8) IS SET TO "NO DELAYS BEYOND R/T".

80.1.2.2.16 Block 1, Word 30. Not Used by Navy.

80.1.2.2.17 Block 1, Word 31. Not Used by Navy.

80.1.2.2.18 Loopback Delay Value. (Block 1, Word 32)

NAVY AIR ONLY

MSB									LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 32	LOOPBACK B VALUE								LOOPBACK A VALUE							

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-7	LOOPBACK VALUE BEYOND R/T ON ANTENNA A LSB: 12.5 NANOSECONDS RANGE: 0 TO 3187.5 NANOSECONDS
8-15	LOOPBACK VALUE BEYOND R/T ON ANTENNA B. LSB: 12.5 NANOSECONDS RANGE: 0 TO 3187.5 NANOSECONDS

THIS WORD IS A "DON'T CARE" UNLESS LOOPBACK PATH (BLOCK 1, WORD 7, BIT 9) IS SET TO "LOOPBACK BEYOND R/T".

NAVY SHIP ONLY

MSB									LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 32	LOOPBACK VALUE BEYOND R/T															

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-7	NOT USED BY NAVY SHIP

NAVY ONLY - INITIALIZATION BLOCK 1

<u>BIT</u>	<u>DESIGNATION</u>
8-15	LOOPBACK VALUE BEYOND R/T LSB: 12.5 NANOSECONDS RANGE: 0 TO 3187.5 NANOSECONDS THIS WORD IS A "DON'T CARE" UNLESS LOOPBACK PATH (BLOCK 1, WORD 7, BIT 9) IS SET TO "LOOPBACK BEYOND R/T".

NAVY ONLY - INITIALIZATION BLOCK 1

80.1.2.3 Initialization Data Block 2.

80.1.2.4

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CHECKSUM (SEE 30.4.1.1)															
wd 2	CONTROL WORD FOR INITIALIZATION BLOCK 2 (SEE 30.4.1.2)															
wd 3	SECONDARY TN WORD 1															
wd 4	SECONDARY TN WORD 2															
wd 5	SECONDARY TN WORD 3															
wd 6	SECONDARY TN WORD 4															
wd 7	SECONDARY TN WORD 5															
wd 8	SECONDARY TN WORD 6															
wd 9	SECONDARY TN WORD 7															
wd 10	SECONDARY TN WORD 8															
wd 11	SECONDARY TN WORD 9															
wd 12	SECONDARY TN WORD 10															
wd 13	SECONDARY TN WORD 11															
wd 14	SECONDARY TN WORD 12															
wd 15	SECONDARY TN WORD 13															
wd 16	SECONDARY TN WORD 14															
wd 17	SECONDARY TN WORD 15															
wd 18	SECONDARY TN WORD 16															
wd 19	REPROMULGATION WORD															
wd 20	PLATFORM INDICATORS															
wd 21	PLATFORM ACTIVITY															
wd 22	MISSION CORRELATOR WORD 1															
wd 23	MISSION CORRELATOR WORD 2															
wd 24	MISSION CORRELATOR WORD 3															
wd 25	MISSION CORRELATOR WORD 4															
wd 26	RECORDER CONTROL WORD 1															
wd 27	RECORDER CONTROL WORD 2															
wd 28	RECORDER CONTROL WORD 3															
wd 29	RECORDER CONTROL WORD 4															
wd 30	NOT USED BY NAVY															
wd 31	NET ENTRY TIME SLOT INHIBIT															
wd 32	RECEIVE ANTENNA CABLE DELAY															

NAVY ONLY - INITIALIZATION BLOCK 2

80.1.2.3.1 Secondary TN (16 Words) (Block 2, Words 3 through 18)

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 3 - 18	T N I	SECONDARY TN or FLIGHT MEMBER TN														

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-14	SECONDARY TRACK NUMBER. (also known as FLIGHT MEMBER TRACK NUMBER - <u>NAVY AIR ONLY</u>) RANGE: 00000 - 77777 (OCTAL) 00000 (OCTAL) = NO STATEMENT - DEFAULT VALUE
15	TRACK NUMBER INDICATOR (TNI) - <u>NAVY AIR ONLY</u> LOGIC 1 = BITS 0-14 OF THIS WORD DESIGNATE A FLIGHT MEMBER TN LOGIC 0 = BITS 0-14 OF THIS WORD DESIGNATE A SECONDARY TN

NAVY SHIP ONLY - SET TO LOGIC 0.

NAVY ONLY - INITIALIZATION BLOCK 2

80.1.2.3.2 Repromulgation Word. (Block 2, Word 19)

MSB											LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 19											CONTR OL		RHC			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-3	REPROMULGATION HOP COUNT (RHC). THE NUMBER OF RETRANSMISSIONS (HOPS) TO BE REQUESTED FOR REPROMULGATION MESSAGES IF THE HOP COUNT IS NOT SPECIFIED IN REPROMULGATION RELAY REQUEST FROM HOST (SEE 80.1.4.8.1.2.2.2 - HEADER WORD 8). 1 - 15 = ASSIGNED NUMBER OF HOPS 0 IS NOT USED DEFAULT VALUE = 3
4-5	REPROMULGATION CONTROL. THE LEVEL OF TERMINAL PARTICIPATION IN REPROMULGATION COMMUNITY BIT 5 • 4 • • • • • 0 • 0 INACTIVE - DEFAULT VALUE 0 • 1 RELAY 1 • 0 NOT USED 1 • 1 RELAY AND ORIGINATE
6-15	NOT USED

80.1.2.3.3 Platform Indicators Word. (Block 2, Word 20)

MSB								LSB								
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 20								PLATFORM INDICATORS								

LOGIC 1 = ENABLE - DEFAULT VALUE FOR AIRBORNE INDICATOR (F-14D AND E-2C) AND COMMAND AND CONTROL INDICATOR (E-2C ONLY) - NAVY AIR ONLY

LOGIC 1 = ENABLE - DEFAULT VALUE FOR COMMAND AND CONTROL INDICATOR - NAVY SHIP ONLY

LOGIC 0 = OFF - DEFAULT VALUE FOR OTHER INDICATORS

BIT

DESIGNATION

0	EXERCISE INDICATOR
1	NOT USED BY NAVY
2	FORCE TELL INDICATOR
3	EMERGENCY INDICATOR ^H - <u>NAVY AIR ONLY</u>
4	COMMAND AND CONTROL INDICATOR
5	SIMULATION INDICATOR (SET TO ZERO FOR OPERATIONAL USE)
6	AIRBORNE INDICATOR - <u>NAVY AIR ONLY</u>
7	FLIGHT LEADER INDICATOR - <u>NAVY AIR ONLY</u>
8	BAILOUT INDICATOR - <u>NAVY AIR ONLY</u>
9-15	NOT USED

^H Since this variable can also be set by a discrete, the "Input Priority" bit (see 80.1.2.2.2) is relevant.

80.1.2.3.4 Platform Activity Word. (Block 2, Word 21)

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 21	TADIL J PLATFORM ACTIVITY AND PLATFORM ID															

TADIL J PLATFORM ACTIVITY AND PLATFORM ID AS DEFINED IN Y256C052 AND J2.2 (NAVY AIR ONLY), AND J2.3 (NAVY SHIP ONLY), MESSAGE SUMMARY SECTIONS IN VOLUME II OF JINTACCS JTIDS TIDP.

NAVY AIR ONLY

DEFAULT FOR E-2C "ACTIVITY" = AEW (AIRBORNE EARLY WARNING)

DEFAULT FOR F-14D "ACTIVITY" = NO STATEMENT/UNKNOWN

DEFAULT FOR E-2C "ID" = AEW & C (AIRBORNE EARLY WARNING AND CONTROL)

DEFAULT FOR F-14D "ID" = FIGHTER

NAVY SHIP ONLY

DEFAULT FOR "ACTIVITY" = LOGIC 0

DEFAULT FOR "ID" = LOGIC 0

NAVY ONLY - INITIALIZATION BLOCK 2

80.1.2.3.5 Recorder Control Words (4 Words) (Block 2, Words 26 through 29). This variable controls recording for the TSRD or the MUX tape recorder (as per the Tape Recorder Port Selection variable in Block 1, Word 6 - see 80.1.2.2.3). The formats for the output blocks are given in 50.1.3.2.2 of Appendix V.

NOTE: UNUSED BITS OF WORDS 1 AND 2 SHOULD BE SET TO LOGIC 1 DURING AN INITIALIZATION LOAD.

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1																
wd 2																
wd 3																
wd 4																

RECORDING BLOCK CONTROL

LOGIC 1 = BLOCK RECORDING OFF - DEFAULT VALUE

LOGIC 0 = BLOCK RECORDING ON

The bit designation shall be as follows:

WORD 1

<u>BIT</u>	<u>DESIGNATION</u>
0	MESSAGE TO TRANSMIT DATA TRANSMISSION BLOCK (DTB)
1	RECEIVED MESSAGE/LOOPBACK TRANSMISSION DTB (FOR THE MESSAGES SPECIFIED BY THE TSRD MESSAGE FILTER WORDS - SEE 30.4.8.1, 30.4.9.1)
2	NAVIGATION DATA FROM SICP DTB
3	START-UP NAVIGATION DATA DTB
4	NAVIGATION DATA FROM NICP DTB
5	BI-DIRECTIONAL INITIALIZATION DATA DTB
6	NICP INITIALIZATION DATA STATUS RESPONSE DTB
7	NPG MAPPING STATUS DTB
8	REAL TIME SLOT ASSIGNMENT SEQUENCE DTB
9	MESSAGE STATUS DTB

NAVY ONLY - INITIALIZATION BLOCK 2

<u>BIT</u>	<u>DESIGNATION</u>
10	NICP 12-SECOND STATUS REPORT DTB
11	SICP STATUS REPORT DTB
12	NOT USED
13	NOT USED
14	SYNCHRONIZATION FILTER DATA DTB
15	REL NAV KALMAN FILTER STATE VECTOR & COVARIANCE DIAGONAL DTB

WORD 2

<u>BIT</u>	<u>DESIGNATION</u>
0	REL NAV KALMAN FILTER OBSERVATION DATA DTB
1	SPARE
2	TERMINAL STATUS
3	PANEL (SACP/SICP AND SICP/SACP) DATA
4	MUX DATA (FOR THE SUB-ADDRESSES SPECIFIED BY THE MUX RECORDING FILTER - SEE 30.4.7.2)
5	NOT USED BY NAVY
6	SICP MEMORY BLOCKS (AS SPECIFIED BY RECORDER BLOCK WORDS - SEE 30.4.7.4)
7	NOT USED BY NAVY
8	NOT USED BY NAVY
9	TACAN DATA - <u>NAVY AIR ONLY</u>
10	CONTROL DISCRETE DATA
11	RTSS DATA AS MODIFIED BY TSR SELECTION
12-15	NOT USED BY NAVY

WORD 3 RESERVED FOR FUTURE EXPANSION (DEFAULT = LOGIC 1 FOR ALL BITS)

WORD 4 NOT USED BY NAVY (DEFAULT = LOGIC 1 FOR ALL BITS)

NAVY ONLY - INITIALIZATION BLOCK 2

80.1.2.4 Time Slot Assignment Block (6 Words/Block)

NOTE: WHEN ANY DATA CHANGE IS MADE TO A TIME SLOT ASSIGNMENT BLOCK, ALL SIX WORDS MUST BE SUBMITTED.

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1		R T S	CM	RR				NET							SET	
wd 2	T / R	INDEX SLOT														
wd 3	Q	TSRPN			ACCESS DESCRIPTION											
wd 4		R D S	RELAY NET							RELAY DELAY, RECEIVE ----- END-TO-END RELAY DELAY						
wd 5	ORIG XMIT NET							NET PARTICIPATION GROUP								
wd 6		TSEC								MSEC						

The bit designation shall be as follows:

WORD 3

BIT DESIGNATION

6-11 ACCESS DESCRIPTION

0	CONTENTION ACCESS	1 PER 48 SECONDS
1	CONTENTION ACCESS	2 PER 48 SECONDS
2	CONTENTION ACCESS	3 PER 48 SECONDS
3	CONTENTION ACCESS	2 PER 24 SECONDS
4	CONTENTION ACCESS	3 PER 24 SECONDS
5	CONTENTION ACCESS	2 PER 12 SECONDS
6	CONTENTION ACCESS	3 PER 12 SECONDS
7	CONTENTION ACCESS	4 PER 12 SECONDS
8	CONTENTION ACCESS	6 PER 12 SECONDS
9	CONTENTION ACCESS	8 PER 12 SECONDS
10	CONTENTION ACCESS	12 PER 12 SECONDS
11	CONTENTION ACCESS	16 PER 12 SECONDS
12	CONTENTION ACCESS	20 PER 12 SECONDS
13	CONTENTION ACCESS	26 PER 12 SECONDS
14	CONTENTION ACCESS	32 PER 12 SECONDS
15	CONTENTION ACCESS	64 PER 12 SECONDS
16	DEDICATED ACCESS MODE	
17	TSR TRANSMIT ACCESS MODE	
18	TSR INITIAL ENTRY ACCESS MODE	
19-63	NOT DEFINED	

NAVY ONLY - INITIALIZATION BLOCK 3-15

- NOTE: 1. RECEIVE ASSIGNMENTS (PER 2ND WORD, BIT 15) MUST HAVE DEDICATED ACCESS MODE (16).
2. ALL TRANSMIT TIME SLOT ASSIGNMENT BLOCKS WITH THE SAME NPG REQUIRE THE SAME ACCESS DESCRIPTION CODE (EXCEPT FOR NPGs THAT EMPLOY TSR AS DESCRIBED BELOW).
3. TO CHANGE THE ACCESS DESCRIPTION FIELD, IT IS FIRST NECESSARY TO DELETE THE ASSIGNMENT (SET=0 IN 1ST WORD, BITS 0-1) AND THEN REINSTATE IT WITH THE NEW ACCESS DESCRIPTION.

NOTE: TRANSMIT SLOT ASSIGNMENT BLOCKS FOR AN NPG THAT EMPLOYS A TSR POOL CAN HAVE A MIXTURE OF ACCESS 16, 17 AND 18 ASSIGNMENTS. NO MORE THAN THREE ACCESS DESCRIPTION 17 TRANSMIT TIME SLOT ASSIGNMENT BLOCKS (TSABs) ARE ACCEPTED PER NPG. FOR EACH NPG WITH ACCESS DESCRIPTION 17 TSABs, ONE ACCESS DESCRIPTION 18 TSAB MUST BE PROVIDED, EXCEPT WHEN CENTRALIZED MODE IS ENABLED (LOGIC 1) IN THE CORRESPONDING INITIALIZATION BLOCK 44 TSR CONTROL DATA (80.1.2.12.1, CONTROL WORD 2, BIT 15). ACCESS DESCRIPTIONS 17 AND 18 ARE ILLEGAL IF NPG IS 1 - 3, 5, 6, 12, 13, 27 OR IF THE T/R BIT, IN WORD 2, IS SET TO 0 ("RECEIVE"). WHEN AN NPG WITH ACCESS DESCRIPTION 16, 17 AND 18 TRANSMIT TSABs IS NOT THE TSR NPG (SEE 60.25.1, STATUS WORD 3), THEN ALL ACCESS DESCRIPTION 17 AND 18 TSABs SHALL OPERATE AS ACCESS DESCRIPTION 16 (DEDICATED ACCESS MODE). (SEE 40.5.25.1 FOR THE LIST OF ALL TSR VALIDITY CHECKS)

12-14 TSR POOL NUMBER (TSRPN)
 0 - 7 = TSR POOL NUMBER
 VALID ONLY IF ACCESS DESCRIPTION IS 17 OR 18

15 QUIESCENT BIT (Q). RESERVED FOR NICP/SICP USE (DO NOT USE)

NOTE: THE QUIESCENT BIT IS SET FOR VOICE AND CONTROL ASSIGNMENTS. QUIESCENT BIT SET TO LOGIC 1 MEANS THAT THE SLOT ASSIGNMENT BLOCK IS NOT TO BE USED BY THE NICP. QUIESCENT BIT SET TO LOGIC 0 MEANS THAT THE SLOT ASSIGNMENT BLOCK IS TO BE USED BY THE NICP. THE BIT IS SET BY THE SICP IN RESPONSE TO HOST INPUTS OF VOICE/CONTROL NETS (INITIALIZATION BLOCK 63) OR NET SELECTION (NAVY AIR ONLY)

NAVY ONLY - INITIALIZATION BLOCK 3-15

WORD 4

<u>BIT</u>	<u>DESIGNATION</u>
------------	--------------------

7-13	RELAY NET WHEN RDS = 0 AND RELAY DELAY, RECEIVE = 0, THIS VARIABLE IS A "DON'T CARE". WHEN RDS = 0 AND RELAY DELAY, RECEIVE = 6-31 0-126 = ASSIGNED NET IF NPG = 9, 12, OR 13, THEN 127 MEANS "USE THE HOST- SUPPLIED NET NUMBER" (80.1.2.21.2 OR 80.1.2.21.3). OTHERWISE, 127 IS AN ILLEGAL VALUE.
------	--

NOTE: RELAY NET IS VALID ONLY WHEN RDS = 0.

14	RELAY DELAY SWITCH (RDS) USED TO IDENTIFY THE DATA GIVEN IN BITS 0-13 OF THIS WORD AND 9-15 OF WORD 5.
----	--

NOTE: RDS = 1 IS VALID ONLY WHEN T/R = 0 (RECEIVE - SEE WORD 2) AND
CM = 1 (PARTITIONED VARIABLE MODE - SEE WORD 1)

80.1.2.5 Relay Slot Assignment Block (6 WORDS/BLOCK)

WORD 3

<u>BIT</u>	<u>DESIGNATION</u>
8-10	RELAY FUNCTION
BIT 10 . 9 . 8	
.....	
0 . 0 . 0	MAIN NET RELAY
0 . 0 . 1	VOICE NET RELAY
0 . 1 . 0	CONTROL NET RELAY (CONR)
0 . 1 . 1	ZOOM RELAY
1 . 0 . 0	NOT USED BY NAVY
1 . 0 . 1	NOT USED BY NAVY
1 . 1 . 0	NOT USED BY NAVY
1 . 1 . 1	PARTICIPATION GROUP RELAY

WORD 5

BIT DESIGNATION

0-8 NET PARTICIPATION GROUP NUMBER (NPG)
 0 = NO STATEMENT
 THE NET PARTICIPATION GROUP FIELD ENTRY SHALL BE A
 FUNCTION OF THE RELAY FUNCTION SELECTED IN WORD 3 AS
 SHOWN:

RELAY FUNCTIONS	RELAY FUNCTION LOGIC STATE	NPG FIELD ENTRY
PG	111	1-8, 10, 11, 14-29, 32-511
VOICE A	001	12
VOICE B	001	13
ZOOM	011	NO NPG FIELD ENTRY
CONTROL	010	9
MAIN NET	000	1-8, 10, 11, 14-29, 32-511

WORD 6

BIT DESIGNATION

0-6 MESSAGE SECURITY VARIABLE (MSEC)
 0 = NO STATEMENT
 1-127 = ASSIGNED MSEC
 WHEN CM=0 AND CNR=0, MSEC=TSEC (BITS 8-14)
 WHEN CM=0 AND CNR=1, MSEC=0 IS ILLEGAL
 WHEN CM=1 AND DND=0, MSEC=0 IS ILLEGAL
 WHEN CM=1 AND DND=1, MSEC IS "DONT CARE"

NOTE: FOR BITS 0-6, MSEC SHOULD BE NON-ZERO WHEN DND=0 AND DOES NOT
 HAVE TO BE ZERO, WHEN DND=1.

80.1.2.5 Initialization Data Block 16.
80.1.2.6

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CHECKSUM (SEE 30.4.1.1)															
wd 2	CONTROL WORD FOR INITIALIZATION BLOCK 16 (SEE 30.4.1.2)															
wd 3	HOST MESSAGE FILTER WORD 1															
wd 4	HOST MESSAGE FILTER WORD 2															
wd 5	HOST MESSAGE FILTER WORD 3															
wd 6	HOST MESSAGE FILTER WORD 4															
wd 7	HOST MESSAGE FILTER WORD 5															
wd 8	HOST MESSAGE FILTER WORD 6															
wd 9	HOST MESSAGE FILTER WORD 7															
wd 10	HOST MESSAGE FILTER WORD 8															
wd 11	HOST MESSAGE FILTER WORD 9															
wd 12	HOST MESSAGE FILTER WORD 10															
wd 13	HOST MESSAGE FILTER WORD 11															
wd 14	HOST MESSAGE FILTER WORD 12															
wd 15	HOST MESSAGE FILTER WORD 13															
wd 16	HOST MESSAGE FILTER WORD 14															
wd 17	HOST MESSAGE FILTER WORD 15															
wd 18	HOST MESSAGE FILTER WORD 16															
wd 19	HOST ADDRESSED/RECEIVED MSG FILTER WORD															
wd 20	NOT USED															
wd 21	NOT USED															
wd 22	NOT USED															
wd 23	NOT USED															
wd 24	NOT USED															
wd 25	NOT USED															
wd 26	NOT USED															
wd 27	NOT USED															
wd 28	NOT USED															
wd 29	NOT USED															
wd 30	NOT USED															
wd 31	NOT USED															
wd 32	NOT USED															

	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
wd 3	J1.7	J1.6	J1.5	J1.4	J1.3	J1.2	J1.1	J1.0	J0.7	J0.6	J0.5	J0.4	J0.3	J0.2	J0.1	J0.0
wd 4	J3.7	J3.6	J3.5	J3.4	J3.3	J3.2	J3.1	J3.0	J2.7	J2.6	J2.5	J2.4	J2.3	J2.2	J2.1	J2.0
wd 5	J5.7	J5.6	J5.5	J5.4	J5.3	J5.2	J5.1	J5.0	J4.7	J4.6	J4.5	J4.4	J4.3	J4.2	J4.1	J4.0
wd 6	J7.7	J7.6	J7.5	J7.4	J7.3	J7.2	J7.1	J7.0	J6.7	J6.6	J6.5	J6.4	J6.3	J6.2	J6.1	J6.0
wd 7	J9.7	J9.6	J9.5	J9.4	J9.3	J9.2	J9.1	J9.0	J8.7	J8.6	J8.5	J8.4	J8.3	J8.2	J8.1	J8.0
wd 8	J11.7	J11.6	J11.5	J11.4	J11.3	J11.2	J11.1	J11.0	J10.7	J10.6	J10.5	J10.4	J10.3	J10.2	J10.1	J10.0
wd 9	J13.7	J13.6	J13.5	J13.4	J13.3	J13.2	J13.1	J13.0	J12.7	J12.6	J12.5	J12.4	J12.3	J12.2	J12.1	J12.0
wd 10	J15.7	J15.6	J15.5	J15.4	J15.3	J15.2	J15.1	J15.0	J14.7	J14.6	J14.5	J14.4	J14.3	J14.2	J14.1	J14.0
wd 11	J17.7	J17.6	J17.5	J17.4	J17.3	J17.2	J17.1	J17.0	J16.7	J16.6	J16.5	J16.4	J16.3	J16.2	J16.1	J16.0
wd 12	J19.7	J19.6	J19.5	J19.4	J19.3	J19.2	J19.1	J19.0	J18.7	J18.6	J18.5	J18.4	J18.3	J18.2	J18.1	J18.0
wd 13	J21.7	J21.6	J21.5	J21.4	J21.3	J21.2	J21.1	J21.0	J20.7	J20.6	J20.5	J20.4	J20.3	J20.2	J20.1	J20.0
wd 14	J23.7	J23.6	J23.5	J23.4	J23.3	J23.2	J23.1	J23.0	J22.7	J22.6	J22.5	J22.4	J22.3	J22.2	J22.1	J22.0
wd 15	J25.7	J25.6	J25.5	J25.4	J25.3	J25.2	J25.1	J25.0	J24.7	J24.6	J24.5	J24.4	J24.3	J24.2	J24.1	J24.0
wd 16	J27.7	J27.6	J27.5	J27.4	J27.3	J27.2	J27.1	J27.0	J26.7	J26.6	J26.5	J26.4	J26.3	J26.2	J26.1	J26.0
wd 17	J29.7	J29.6	J29.5	J29.4	J29.3	J29.2	J29.1	J29.0	J28.7	J28.6	J28.5	J28.4	J28.3	J28.2	J28.1	J28.0
wd 18	J31.7	J31.6	J31.5	J31.4	J31.3	J31.2	J31.1	J31.0	J30.7	J30.6	J30.5	J30.4	J30.3	J30.2	J30.1	J30.0

NAVY AIR ONLY

LOGIC 0 = PROVIDE MESSAGE - E-2C DEFAULT FOR ALL BUT J31.7 MESSAGE

LOGIC 1 = DO NOT PROVIDE MESSAGE - E-2C DEFAULT FOR J31.7 MESSAGE

F-14D DEFAULT FOR J2.0, J2.2, J2.3, J2.5, J2.6, J12.0, J12.1,
J12.3 - J12.6, J13.2 = LOGIC 0 (PROVIDE)

F-14D DEFAULT FOR ALL OTHER MESSAGES = LOGIC 1 (DO NOT PROVIDE)

NAVY SHIP ONLY

LOGIC 0 = PROVIDE MESSAGE - DEFAULT VALUE

LOGIC 1 = DO NOT PROVIDE MESSAGE

THESE WORDS, ALONG WITH THE HOST ADDRESSED/RECEIVED MESSAGE FILTER WORD (SEE 80.1.2.6.2) AND (FOR NAVY AIR ONLY) THE HOST NPG FILTER WORDS (SEE 80.1.2.14.5), DETERMINE WHICH MESSAGES ARE TO BE PROVIDED TO THE HOST VIA TOMs 2-20, (SEE 80.1.4.7.2).

80.1.2.6.2 Host Addressed/Received Message Filter Word. (Block 16, Word 19)

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 19						FT								A L L	S E C	P R I

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	PRIMARY TRACK NUMBER FILTER (PRI) LOGIC 0 = PROVIDE ALL MESSAGES ADDRESSED TO PRIMARY TN. <u>NAVY AIR ONLY</u> - DEFAULT VALUE = LOGIC 0 (PROVIDE) <u>NAVY SHIP ONLY</u> - DEFAULT VALUE = LOGIC 1 (DO NOT PROVIDE)
1	SECONDARY TRACK NUMBER FILTER (SEC) DEFAULT VALUE = LOGIC 1 (DO NOT PROVIDE) LOGIC 0 = PROVIDE ALL MESSAGES ADDRESSED TO A SECONDARY TN OR TO THE COLLECTIVE ADDRESS TN OR (<u>NAVY SHIP ONLY</u>) TO A SPECIAL SECONDARY TN DEFAULT VALUE = LOGIC 0 (PROVIDE) <u>NAVY AIR ONLY</u> - FOR FLIGHT MEMBER TNs (SEE 80.1.2.3.1) THIS FILTER IS APPLIED TO THE STN FIELD IN THE RECEIVED MESSAGE HEADER. THIS STN FIELD DESIGNATES THE ORIGINATOR OF THE MESSAGE.
2	ALL TRACK NUMBERS FILTER (ALL)H LOGIC 0 = PROVIDE ALL ADDRESSED MESSAGES <u>NAVY AIR ONLY</u> - DEFAULT VALUE = LOGIC 1 (DO NOT PROVIDE) <u>NAVY SHIP ONLY</u> - DEFAULT VALUE = LOGIC 0 (PROVIDE)

H IF THIS FIELD IS SET TO 0 (PROVIDE ALL), THE VALUES FOR BIT 0 AND BIT 1 ARE IGNORED.

80.1.2.6.3 Block 16, Word 20-27. Not used by Navy.

80.1.2.7 Initialization Block 20.

80.1.2.7.1 MUX Data Recording Filter Words. (Block 20, Words 22-25). These words specify the MUX subaddresses that are to be recorded via the MUX or TSRD (see 80.1.2.3.5).

	MSB								LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
MUX INPUT wd 1	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
MUX INPUT wd 2	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
MUX OUTPUT T wd 1	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
MUX OUTPUT T wd 2	31	30	29	28							21 H	20	19	18	17	16

H APPLIES TO NAVY AIR ONLY, THIS BIT IS NOT USED BY NAVY SHIP.

NAVY AIR ONLY

LOGIC 0 = PROVIDE MUX DATA FOR CORRESPONDING MUX SUBADDRESS - E-2C DEFAULT VALUE

LOGIC 1 = DO NOT PROVIDE MUX DATA FOR CORRESPONDING MUX SUBADDRESS - F-14D DEFAULT VALUE

- NOTES: 1. SEE TABLES VIII-I AND VIII-II FOR MUX SUBADDRESS DEFINITIONS.
2. TERMINAL OUTPUT MESSAGES 22-27 CANNOT BE REQUESTED HERE FOR REDUNDANCY REASONS. TOM 21 CAN BE REQUESTED ONLY WHEN THE FLYCATCHER FUNCTION IS IN USE (SEE 80.1.2.16.6).

NAVY SHIP ONLY

LOGIC 0 = PROVIDE MUX DATA FOR CORRESPONDING MUX SUBADDRESS - DEFAULT VALUE

LOGIC 1 = DO NOT PROVIDE MUX DATA FOR CORRESPONDING MUX SUBADDRESS

- NOTES: 1. SEE TABLES VIII-I AND VIII-II FOR MUX SUBADDRESS DEFINITIONS.
2. TERMINAL OUTPUT MESSAGES 21-27 CANNOT BE REQUESTED HERE FOR REDUNDANCY REASONS.

NAVY ONLY - INITIALIZATION BLOCK 20

80.1.2.7.2 Block 20, Word 26-29. Not used by Navy.

NAVY ONLY - INITIALIZATION BLOCK 20

80.1.2.8 Initialization Block 23.

80.1.2.8.1 TSRD Addressed/Loopback/Received MSG Filter Word. (Block 23, Word 4). This word, along with the TSRD message filter words (see 30.4.8.1), determine which received messages are to be recorded via the TSRD or MUX (see 80.1.2.3.5).

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 4					H D R	F T	V B	V A		LOOPBACK				ADDRESSED		
										A L L	R T T	T E S T	P L I	A L L	S E C	P R I

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	PRIMARY TRACK NUMBER FILTER (ADDRESSED PRI) LOGIC 0 = PROVIDE ALL MESSAGES ADDRESSED TO PRIMARY TN
1	SECONDARY TRACK NUMBER FILTER (ADDRESSED SEC)H LOGIC 0 = PROVIDE ALL MESSAGES ADDRESSED TO A SECONDARY TN OR THE COLLECTIVE ADDRESS TN OR (<u>NAVY SHIP ONLY</u>) TO A SPECIAL SECONDARY TN
2	ALL TRACK NUMBERS FILTER (ADDRESSED ALL)I LOGIC 0 = PROVIDE ALL ADDRESSED MESSAGES
3	PPLI LOOPBACK FILTER (LOOPBACK PPLI) LOGIC 0 = PROVIDE ALL PPLI LOOPBACK MESSAGES
4	TEST LOOPBACK FILTER (LOOPBACK TEST) LOGIC 0 = PROVIDE ALL TEST LOOPBACK MESSAGES
5	RTT LOOPBACK FILTER (LOOPBACK RTT) LOGIC 0 = PROVIDE ALL RTT LOOPBACK MESSAGES
6	ALL LOOPBACKS FILTER (LOOPBACK ALL)HH LOGIC 0 = PROVIDE ALL LOOPBACK MESSAGES

H THE SICP IGNORES FLIGHT MEMBER TNs (SEE 80.1.2.3.1) IN APPLICATION OF THIS FILTER (NAVY AIR ONLY).

I IF THIS FIELD IS SET TO 0 (PROVIDE ALL), THE VALUES FOR BIT 0 AND BIT 1 ARE IGNORED.

HH IF THIS FIELD IS SET TO 0 (PROVIDE ALL), THE VALUES FOR BITS 3-5 ARE IGNORED.

NAVY ONLY - INITIALIZATION BLOCK 23

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
7	NOT USED BY NAVY
8	RECEIVED VOICE A FILTER (VA) LOGIC 0 = PROVIDE ALL RECEIVED VOICE A MESSAGES
9	RECEIVED VOICE B FILTER (VB) LOGIC 0 = PROVIDE ALL RECEIVED VOICE B MESSAGES
10	RECEIVED NON-VOICE FREE TEXT FILTER (FT) LOGIC 0 = PROVIDE ALL NON-VOICE RECEIVED FREE TEXT MESSAGES
11	RECEIVED MESSAGE HEADER FILTER (HDR)H LOGIC 0 = PROVIDE RECEIVED MESSAGE AND LOOPBACK MESSAGE HEADERS
12-15	NOT USED
DEFAULT VALUES = LOGIC 1 (DO NOT PROVIDE)	

H HEADERS ARE PROVIDED ONLY IF THE COMPLETE MESSAGE IS NOT PROVIDED.

80.1.2.8.2 Message Structure (32 Words). (Block 23, Words 5 through 32 and Block 24, Words 3 through 6). NAVY AIR ONLY - This variable defines the Packing Limit for a common carrier message (received in TIM 2-11, see 80.1.4.8.1.2) when its Packing Limit field (in Header word 2) is specified as "No Statement", for Air Platform and System Status messages (see 80.1.4.6.5), for Target Sorting messages (see 80.1.4.6.4) and for Voice messages. NAVY SHIP ONLY - This variable defines the Packing Limit for a common carrier message (received in TIM 2-11, see 80.1.4.8.1.2) when its Packing Limit field (in Header word 2) is specified as "No Statement" and for Voice messages.

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
					PL		NPG								

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-8	NET PARTICIPATION GROUP (NPG) 0 = NO STATEMENT - DEFAULT VALUE 1-511 = ASSIGNED NPG
9-10	PACKING LIMIT. ALLOWABLE PACKING FOR A MESSAGE IN THE NPG (PL)
	BIT 10 • 9 •••••••• 0 • 0 STANDARD 0 • 1 STANDARD OR PACKED-2 DOUBLE • PULSE 1 • 0 STANDARD OR PACKED-2 SINGLE PULSE 1 • 1 STANDARD, PACKED-2 DP, • PACKED-2 SP OR PACKED-4
11-15	NOT USED

NOTE: THE SICP WILL USE A (DEFAULT) PACKING LIMIT OF PACKED-2 DP, IF THE IPF OVERRIDE IS NOT OFF, 40/20 RULE (SEE 80.1.2.2.1), OR STANDARD, IF THE IPF OVERRIDE IS OFF, 40/20 RULE, FOR COMMON CARRIER MESSAGES WHEN THE PACKING LIMIT IS NEITHER SPECIFIED HERE NOR IN HEADER WORD 2 OF TIM 2-11 (SEE 80.1.4.8.1.2.2.2)

NAVY ONLY - INITIALIZATION BLOCK 23

80.1.2.9 Initialization Data Block 24.

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CHECKSUM (SEE 30.4.1.1)															
wd 2	CONTROL WORD FOR INITIALIZATION BLOCK 24 (SEE 30.4.1.2)															
wd 3	MESSAGE STRUCTURE WORD 29															
wd 4	MESSAGE STRUCTURE WORD 30															
wd 5	MESSAGE STRUCTURE WORD 31															
wd 6	MESSAGE STRUCTURE WORD 32															
wd 7	NOT USED BY NAVY															
wd 8	NOT USED BY NAVY															
wd 9	NOT USED BY NAVY															
wd 10	NOT USED BY NAVY															
wd 11	NOT USED BY NAVY															
wd 12	NOT USED BY NAVY															
wd 13	NOT USED BY NAVY															
wd 14	NOT USED BY NAVY															
wd 15	SPECIAL SECONDARY TN WORD 1 - (<u>NAVY SHIP ONLY</u>)															
wd 16	SPECIAL SECONDARY TN WORD 2 - (<u>NAVY SHIP ONLY</u>)															
wd 17	SPECIAL SECONDARY TN WORD 3 - (<u>NAVY SHIP ONLY</u>)															
wd 18	SPECIAL SECONDARY TN WORD 4 - (<u>NAVY SHIP ONLY</u>)															
wd 19	SPECIAL SECONDARY TN WORD 5 - (<u>NAVY SHIP ONLY</u>)															
wd 20	SPECIAL SECONDARY TN WORD 6 - (<u>NAVY SHIP ONLY</u>)															
wd 21	SPECIAL SECONDARY TN WORD 7 - (<u>NAVY SHIP ONLY</u>)															
wd 22	SPECIAL SECONDARY TN WORD 8 - (<u>NAVY SHIP ONLY</u>)															
wd 23	NOT USED															
wd 24	NOT USED															
wd 25	NOT USED															
wd 26	NOT USED															
wd 27	NOT USED															
wd 28	NOT USED															
wd 29	NOT USED															
wd 30	NOT USED															
wd 31	NOT USED															
wd 32	NOT USED															

NAVY ONLY - INITIALIZATION BLOCK 24

80.1.2.9.1 Block 24, Words 7 through 14. Not used by Navy.

80.1.2.9.2 Special Secondary TNs. (Block 24, Words 15 through 22). The following bit array structure provides a one-bit cell for each special secondary address of 0 through 177 (octal). The Terminal shall provide R/C processing for messages addressed to a (valid) special secondary TN.

NAVY SHIP ONLY

	MSB												LSB			
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 15	17	16	15	14	13	12	11	10	7	6	5	4	3	2	1	0
wd 16	37	36	35	34	33	32	31	30	27	26	25	24	23	22	21	20
wd 17	57	56	55	54	53	52	51	50	47	46	45	44	43	42	41	40
wd 18	77	76	75	74	73	72	71	70	67	66	65	64	63	62	61	60
wd 19	117	116	115	114	113	112	111	110	107	106	105	104	103	102	101	100
wd 20	137	136	135	134	133	132	131	130	127	126	125	124	123	122	121	120
wd 21	157	156	155	154	153	152	151	150	147	146	145	144	143	142	141	140
wd 22	177	176	175	174	173	172	171	170	167	166	165	164	163	162	161	160

LOGIC 1 = SPECIFIED ADDRESS IS A SPECIAL SECONDARY TN

LOGIC 0 = SPECIFIED ADDRESS IS NOT A SPECIAL SECONDARY TN - DEFAULT

NOTE: Addresses 0, 77 and 177 (octal) are invalid special secondary TNs.

NAVY ONLY - INITIALIZATION BLOCK 24

80.1.2.10 Initialization Data Block 25. Not used by Navy.

80.1.2.11 Initialization Data Blocks 26-43. Not used by Navy.

NAVY ONLY - INITIALIZATION BLOCK 26-43

80.1.2.12 Initialization Data Block 44. This paragraph has been deleted.
Refer to paragraph 30.4.13.

80.1.2.12.1 This paragraph has been deleted. Refer to paragraph
30.4.13.1.

80.1.2.13 Initialization Data Blocks 45-55. Not used by Navy.

NAVY ONLY - INITIALIZATION BLOCK 44

80.1.2.14 Initialization Data Block 56.

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CHECKSUM (SEE 30.4.1.1)															
wd 2	CONTROL WORD FOR INITIALIZATION BLOCK 56 (SEE 30.4.1.2)															
wd 3	MUX MESSAGE RATE WORD (<u>NAVY AIR ONLY</u>)															
wd 4	NPG BUFFER 3 WORD															
wd 5	NPG FOR GROUP A TARGET SORTING MSGS (<u>NAVY AIR ONLY</u>)															
wd 6	NPG FOR GROUP B TARGET SORTING MSGS (<u>NAVY AIR ONLY</u>)															
wd 7	HOST NPG FILTER WORD 1 (<u>NAVY AIR ONLY</u>)															
wd 8	HOST NPG FILTER WORD 2 (<u>NAVY AIR ONLY</u>)															
wd 9	ASN AND CB CONTROL WORD (<u>NAVY AIR ONLY</u>)															
wd 10	ASN/CB SLOT SELECTION WORD 1 (<u>NAVY AIR ONLY</u>)															
wd 11	ASN/CB SLOT SELECTION WORD 2 (<u>NAVY AIR ONLY</u>)															
wd 12	ASN/CB SLOT SELECTION WORD 3 (<u>NAVY AIR ONLY</u>)															
wd 13	ASN/CB SLOT SELECTION WORD 4 (<u>NAVY AIR ONLY</u>)															
wd 14	ASN/CB SLOT SELECTION WORD 5 (<u>NAVY AIR ONLY</u>)															
wd 15	ASN/CB SLOT SELECTION WORD 6 (<u>NAVY AIR ONLY</u>)															
wd 16	LOOPBACK STATUS, LTTI AND RELAY INHIBIT CONTROL															
wd 17	NAV TIME OFFSET WORD															
wd 18	INS TYPE WORD (<u>NAVY AIR ONLY</u>)															
wd 19	NPG BUFFER 1 WORD															
wd 20	NPG BUFFER 2 WORD															
wd 21																
wd 22																
wd 23																
wd 24																
wd 25																
wd 26																
wd 27																
wd 28																
wd 29																
wd 30																
wd 31																
wd 32																

NAVY ONLY - INITIALIZATION BLOCK 56

80.1.2.14.1 MUX Message Rate Word (Block 56, Word 3).

<u>NAVY AIR ONLY</u>																
MSB												LSB				
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 3												RATE				

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-4	MESSAGE RATE - <u>NAVY AIR ONLY</u> THE MAXIMUM NUMBER OF MUX SUBADDRESSES THE IU IS ALLOWED TO USE IN EACH MUX CYCLE TO TRANSFER RECEIVED MESSAGES TO THE HOST. 1-19 = ASSIGNED MAXIMUM NUMBER OF SUBADDRESSES 0, 20-31 = NO STATEMENT DEFAULT VALUE = 19
5-15	NOT USED

80.1.2.14.2 NPG Buffer 3 Word (Block 56, Word 4).

MSB								LSB								
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 4								NPG BUFFER 3								

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-8	THE THIRD HOST-DEFINED NPG FOR WHICH THE SICP WILL PROVIDE SPECIAL BUFFERS (NPG BUFFER 3) RANGE: 0 - 511 0 = NO STATEMENT OTHER VALUES = ASSIGNED NPG DEFAULT VALUE = 0 (NO STATEMENT) FOR THIS NPG, THE SICP WILL PROVIDE SPECIAL BUFFERING FOR COMMON CARRIER MESSAGES RECEIVED FROM THE HOST.
9-15	NOT USED

80.1.2.14.3 NPG for Group A Target Sorting Messages (Block 56, Word 5).

<u>NAVY AIR ONLY</u>																
MSB								LSB								
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 5								NPG A								

The bit designation shall be as follows:

BITDESIGNATION

0-8

NPG A - NAVY AIR ONLY

NPG TO BE USED BY THE DPG IN TRANSMITTING GROUP A
TARGET SORTING MESSAGES (NPG A)

0 = NO STATEMENT - E-2C DEFAULT VALUE

1-511 = GIVEN NPG

9 = F-14D DEFAULT VALUE

NOTE: WHEN THE NPG IS 0, NO GROUP A TARGET SORTING TRANSMISSIONS
ARE MADE.

9-15

SPARE

80.1.2.14.4 NPG for Group B Target Sorting Messages (Block 56, Word 6).

<u>NAVY AIR ONLY</u>																
MSB								LSB								
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 6								NPG B								

The bit designation shall be as follows:

BITDESIGNATION

0-8

NPG B - NAVY AIR ONLY

NPG TO BE USED BY THE DPG IN TRANSMITTING GROUP B
TARGET SORTING MESSAGES (NPG B)

0 = NO STATEMENT - E-2C DEFAULT VALUE

1-511 = GIVEN NPG

19 = F-14D DEFAULT VALUE

NOTE: WHEN THE NPG IS 0, NO GROUP B TARGET SORTING TRANSMISSIONS
ARE MADE.

9-15

SPARE

NAVY ONLY - INITIALIZATION BLOCK 56

80.1.2.14.5 Host NPG Filter Words (Block 56, Words 7-8).

<u>NAVY AIR ONLY</u>																
MSB								LSB								
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 7	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 8		30	29	28	27	26	25	24	23	22	21	20	19	18	17	16

The bit designation shall be as follows:

NAVY AIR ONLY

LOGIC 0 = PROVIDE TO THE HOST MESSAGES RECEIVED ON THE CORRESPONDING NPG. DEFAULT VALUE.

LOGIC 1 = DO NOT PROVIDE TO THE HOST MESSAGES RECEIVED ON THE CORRESPONDING NPG.

NOTES: (1) NPG "0" CORRESPONDS TO SLOTS FOR WHICH NO NPG IS ASSIGNED.

(2) NPG "30" CORRESPONDS TO NPG'S 32-511.

80.1.2.14.6 Advanced Slot Notification and Composite Blanking Control (Block 56, Word 9).

<u>NAVY AIR ONLY</u>																
MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 9										C B L L	C E	A S N E	ADV			A S N M S

The bit designation shall be as follows:

BIT

DESIGNATION

0

ADVANCED SLOT NOTIFICATION MODE SELECTION (ASNMS) -
NAVY AIR ONLY

LOGIC 0 = MODE A. THE IU WILL IDENTIFY EACH SLOT OF INTEREST WITH A SIGNAL "ADV" ("ADV" IS DEFINED IN BITS 1-3) SLOTS IN ADVANCE OF THE SLOT OF INTEREST. DEFAULT VALUE.

LOGIC 1 = MODE B. THE IU WILL DO THE MODE A PROCESSING AND THEN WILL CONTINUE THE SIGNAL EACH SLOT THEREAFTER, THROUGH AND INCLUDING THE ACTUAL SLOT OF INTEREST.

NAVY ONLY - INITIALIZATION BLOCK 56

NOTE: THE SLOTS OF INTEREST ARE DEFINED IN WORDS 10-15 OF THIS INITIALIZATION BLOCK AND IN WORDS 9-14 OF TERMINAL INPUT MESSAGE 16 (SEE 80.1.4.6.6.6).

BIT DESIGNATION

1-3 ADVANCE VALUE (ADV) - NAVY AIR ONLY
RANGE = 0-7
DEFAULT = 0

THIS VARIABLE IS DESCRIBED ABOVE IN THE DEFINITION OF THE "AB" VARIABLE (BIT 0). NOTE THAT "ADV" = 0 MEANS THAT THE ONLY SIGNAL GIVEN (REGARDLESS OF THE MODE A/B SELECTION) WILL BE COINCIDENT WITH THE SLOT OF INTEREST.

4 ADVANCED SLOT NOTIFICATION ENABLE (ASNE) - NAVY AIR ONLY
LOGIC 1 = ENABLE ASN
LOGIC 0 = DISABLE ASN (DEFAULT)

5 COMPOSITE BLANKING ENABLE (CE) - NAVY AIR ONLY
LOGIC 1 = ENABLE CB
LOGIC 0 = DISABLE CB (DEFAULT)

COMPOSITE BLANKING IS A "0 SLOTS IN ADVANCE" VERSION OF ADVANCED SLOT NOTIFICATION. THE SLOTS OF INTEREST ARE IDENTICAL TO THOSE OF ADVANCED SLOT NOTIFICATION (E.G., DEFINED IN WORDS 10-15 OF THIS INITIALIZATION BLOCK AND WORDS 9-14 OF TERMINAL INPUT MESSAGE 16).

6
ONLY COMPOSITE BLANKING LOGIC LEVEL (CBL) - NAVY AIR
LOGIC 1 = INVERTED. COMPOSITE BLANKING WILL BE DONE VIA AN "INVERTED" SIGNAL.
LOGIC 0 = TRUE. COMPOSITE BLANKING WILL BE DONE VIA A "TRUE" SIGNAL. (DEFAULT)

7-15 SPARE

NAVY ONLY - INITIALIZATION BLOCK 56

80.1.2.14.7 Advanced Slot Notification/Composite Blanking Slot Selection Words (Block 56, Word 10-15).

NAVY AIR ONLY																
MSB								LSB								
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 10 -15	R T R R	R T	R R C V	T R R	T O R	T	R	NPG								

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>	
0-8	NET PARTICIPATION GROUP (NPG) - <u>NAVY AIR ONLY</u>	
	0 = NO STATEMENT - DEFAULT	
	1-511 = ASSIGNED NPG	
	<u>NAVY AIR ONLY</u>	
9	RECEIVE ONLY (R)	...
10	TRANSMIT ONLY (T)	•
11	TRANSMIT OVER RECEIVE (TOR)	• LOGIC 0
12	TRANSMIT OVER RELAY RECEIVE (TRR)	•
13	RELAY RECEIVE (RRCV)	• = DO NOT
14	RELAY TRANSMIT (RT)	•
15	RELAY TRANSMIT OVER RELAY	• LOGIC 1
	RECEIVE (RTRR)	• = PROVIDE
		•
		...

THE IU WILL SELECT FOR ASN AND CB ALL SLOTS THAT ARE BOTH IN THE GIVEN NPG AND IN ONE OF THE CATEGORIES CHOSEN (I.E., SET TO LOGIC 1) IN BITS 9-15.

NOTE: TIME SLOTS IN WHICH THE TERMINAL MAY AUTOMATICALLY TRANSMIT THE INITIAL ENTRY (J0.0) MESSAGE -- SET A, SLOTS 0, 1536, 3072... -- CANNOT BE SELECTED USING BLOCK 56. TIM 16, WORDS 9-14, WOULD HAVE TO BE USED. (SEE 80.1.4.8.1.6.2.9).

80.1.2.14.8 Loopback Status, LTTI and Relay Inhibit Control (Block 56, Word 16).

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 16														L T T I	R I	L B

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOOPBACK STATUS CONTROL (LB). LOGIC 0 = THE IU WILL PROVIDE LOOPBACK STATUS ON A MAXIMUM OF 10 MESSAGES PER MUX CYCLE. E-2C AND SHIP DEFAULT. LOGIC 1 = THE IU WILL PROVIDE LOOPBACK STATUS ON A MAXIMUM OF 3 MESSAGES PER MUX CYCLE.F-14D DEFAULT
1	RELAY INHIBIT CONTROL (RI) LOGIC 1 = ENABLE RELAY INHIBIT. LOGIC 0 = DISABLE RELAY INHIBIT. DEFAULT.
2	LONG TERM TRANSMIT INHIBIT CONTROL (LTTI)H LOGIC 0 = DISABLE LONG TERM TRANSMIT INHIBIT. DEFAULT. LOGIC 1 = ENABLE LONG TERM TRANSMIT INHIBIT
3-15	SPARE
H	THE IU WILL ALWAYS RESPOND TO THE LAST INPUT (VIA A DISCRETE OR THE MUX) OF THIS VARIABLE REGARDLESS OF THE SETTING (<u>NAVY AIR ONLY</u>) OF THE INPUT PRIORITY BIT (BLOCK 1, WORD 5, BIT 9).

80.1.2.14.9 NAV Time Offset Word (Block 56, Word 17).

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 17	OV								T UPDATE OFFSET				T COMP OFFSET			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-3	TIME OF COMPUTATION OFFSET (T COMP OFFSET) LSB: 10 MILLISECONDS RANGE: 0-150 MILLISECONDS DEFAULT: 5 (50 MILLISECONDS) VALIDITY: SPECIFIED BY OV BIT

NOTE: THIS OFFSET APPLIES TO BOTH VELOCITY AND ATTITUDE TIMES OF COMPUTATION.

4-7	TIME OF UPDATE OFFSET (T UPDATE OFFSET). FORMAT IS SAME AS TIME OF COMPUTATION OFFSET. DEFAULT: 5 (50 MILLISECONDS) VALIDITY: SPECIFIED BY OV BIT
8-14	SPARE
15	OFFSET VALIDITY (OV) LOGIC 0 = TIME OFFSETS INVALID. USE TIME TAGS PROVIDED IN NAV MUX BLOCK (TERMINAL INPUT MESSAGE 17, SEE 80.1.4.6.7 AND 80.1.4.8.1.7). (F-14D DEFAULT) (NAVY SHIP DEFAULT) LOGIC 1 = TIME OFFSETS VALID. NAV DATA IS VALID AT (TIME OF RECEIPT OF NAV MUX BLOCK MINUS THE APPROPRIATE TIME OFFSET). (E-2C DEFAULT)

80.1.2.14.10 INS Type Word (Block 56, Word 18).

<u>NAVY AIR ONLY</u>															LSB	
MSB	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 18															INS TYPE	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-1	INERTIAL NAVIGATION SYSTEM (INS) TYPE - <u>NAVY AIR ONLY</u>
	<u>CODING</u> <u>SYSTEM</u>
	0 ASN-139A (DEFAULT FOR F-14D)
	1 ASN-92 (DEFAULT FOR E-2C)
	2-3 RESERVED FOR FUTURE GROWTH
2-15	SPARE

NAVY ONLY - INITIALIZATION BLOCK 56

80.1.2.14.11 NPG Buffer 1 Word (Block 56, Word 19).

MSB								LSB								
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 19								NPG BUFFER 1								

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-8	<p>THE FIRST HOST-DEFINED NPG FOR WHICH THE SICP WILL PROVIDE SPECIAL BUFFERS (NPG BUFFER 1)</p> <p>RANGE: 0 - 511</p> <p>0: NO STATEMENT</p> <p>OTHER VALUES: ASSIGNED NPG</p> <p>E-2C AND SHIP DEFAULT: 7</p> <p>F-14D DEFAULT: 0</p> <p>FOR THIS NPG, THE SICP WILL PROVIDE SPECIAL BUFFERING FOR COMMON CARRIER MESSAGES RECEIVED FROM THE HOST.</p>
9-15	NOT USED

80.1.2.14.12 NPG Buffer 2 Word (Block 56, Word 20).

MSB								LSB								
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 20								NPG BUFFER 2								

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-8	<p>THE SECOND HOST-DEFINED NPG FOR WHICH THE SICP WILL PROVIDE SPECIAL BUFFERS (NPG BUFFER 2)</p> <p>RANGE: 0 - 511</p> <p>0: NO STATEMENT - F-14D DEFAULT VALUE</p> <p>OTHER VALUES: ASSIGNED NPG</p> <p>SHIPBOARD DEFAULT: 8</p> <p>E-2C DEFAULT: 9</p> <p>FOR THIS NPG, THE SICP WILL PROVIDE SPECIAL BUFFERING FOR COMMON CARRIER MESSAGES RECEIVED FROM THE HOST.</p>
9-15	NOT USED

80.1.2.15 Initialization Data Block 57. NAVY AIR ONLY.

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CHECKSUM (SEE 30.4.1.1)															
wd 2	CONTROL WORD FOR INITIALIZATION BLOCK 57 (SEE 30.4.1.2)															
wd 3	DEFAULT NET WORD															
wd 4	NPG 1 NET WORD															
wd 5	NPG 2 NET WORD															
wd 6	NPG 3 NET WORD															
wd 7	NPG 4 NET WORD															
wd 8	NPG 5 NET WORD															
wd 9	NPG 6 NET WORD															
wd 10	NPG 7 NET WORD															
wd 11	NPG 8 NET WORD															
wd 12	NPG 9 NET WORD															
wd 13	NPG 10 NET WORD															
wd 14	NPG 11 NET WORD															
wd 15	NPG 12 NET WORD															
wd 16	NPG 13 NET WORD															
wd 17	NPG 14 NET WORD															
wd 18	NPG 15 NET WORD															
wd 19	NPG 16 NET WORD															
wd 20	NPG 17 NET WORD															
wd 21	NPG 18 NET WORD															
wd 22	NPG 19 NET WORD															
wd 23	NPG 20 NET WORD															
wd 24	NPG 21 NET WORD															
wd 25	NPG 22 NET WORD															
wd 26	NPG 23 NET WORD															
wd 27	NPG 24 NET WORD															
wd 28	NPG 25 NET WORD															
wd 29	NPG 26 NET WORD															
wd 30	NPG 27 NET WORD															
wd 31	NPG 28 NET WORD															
wd 32	NPG 29 NET WORD															

NAVY ONLY - INITIALIZATION BLOCK 57

80.1.2.15.1 Default Net Word (Block 57, Word 3).

<u>NAVY AIR ONLY</u>																
MSB								LSB								
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 3										DNET						

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-6	DEFAULT NET (DNET) - <u>NAVY AIR ONLY</u> 0-126 = ASSIGNED NET 127 = NO STATEMENT DEFAULT VALUE = 0
7-15	NOT USED

NOTE: SEE NOTES FOR BLOCK 57, WORDS 4-32.

NOTE: THE NET SELECTION PROCESSING FOR THIS VARIABLE CONSISTS OF CHANGING THE DEFAULT NET (SEE 30.4.2.13).

80.1.2.15.2 NPG 1-29 Net Words (Block 57, Words 4-32).

<u>NAVY AIR ONLY</u>																
MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
										NNET						

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-6	NET FOR THE CORRESPONDING NPG (NNET) - <u>NAVY AIR ONLY</u> 0-126 = ASSIGNED NET FOR THE NPG 127 = NO STATEMENT - DEFAULT VALUE
7-15	SPARE

NOTE: FOR INITIALIZATION BLOCK 57

- 1) WHEN THE SICP RECEIVES THIS INITIALIZATION BLOCK (VIA TERMINAL INPUT MESSAGE 1) WITH DATA WORD COUNT SET TO 30 (SEE 30.4.1.2), THE SICP SHALL STORE THE CONTAINED INFORMATION BUT SHALL NOT PERFORM ANY FURTHER PROCESSING.
- 2) WHEN THE SICP RECEIVES THIS INITIALIZATION BLOCK WITH DATA WORD COUNT SET TO 1, THE SICP SHALL CONSIDER THIS BLOCK TO BE A "NET SELECTION" REQUEST AND SHALL ATTEMPT TO CHANGE THE NETS FOR ALL ASSIGNMENT BLOCKS OF THE ASSOCIATED NPG (E.G., THE NPG CORRESPONDING TO THE STARTING DATA WORD - SEE 30.4.1.2) TO THE SPECIFIED NET NUMBER. THE STATUS OF THIS NET SELECTION REQUEST SHALL BE REPORTED IN STATUS BLOCK 1 (SEE 40.5.1.5 AND 40.5.1.6). IF THE REQUEST IS SUCCESSFULLY EXECUTED, THE SICP SHALL APPROPRIATELY UPDATE ITS STORED VERSION OF INITIALIZATION BLOCK 57. IF THE REQUEST IS NOT SUCCESSFULLY EXECUTED, THE STORED VERSION (E.G., THE VERSION PRIOR TO THE NET SELECTION REQUEST) SHALL NOT BE CHANGED.
- 3) WHEN THE SICP RECEIVES THIS BLOCK WITH DATA WORD COUNT NOT SET TO EITHER 1 OR 30, THE SICP SHALL COMPLETELY IGNORE THE BLOCK.
- 4) CHANGES TO NPG 12 (VOICE A), NPG 13 (VOICE B) AND NPG 9 (CONTROL) ARE MAPPED INTO THE CORRESPONDING SPOTS IN INITIALIZATION BLOCK 63, WORDS 4-5 (SEE 80.1.2.15.2, 30.4.17.3).
- 5) NET SELECTIONS CAN ALSO BE REQUESTED BY TIM 16, SEE 80.1.4.6.6.8.

NAVY ONLY - INITIALIZATION BLOCK 57

80.1.2.16 Initialization Data Block 58. NAVY AIR ONLY

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CHECKSUM (SEE 30.4.1.1)															
wd 2	CONTROL WORD FOR INITIALIZATION BLOCK 58 (SEE 30.4.1.2)															
wd 3	FLYCATCHER INPUT WORD 1															
wd 4	FLYCATCHER INPUT WORD 2															
wd 5	FLYCATCHER INPUT WORD 3															
wd 6	FLYCATCHER INPUT WORD 4															
wd 7	FLYCATCHER INPUT WORD 5 - FUNCTION REQUEST															
wd 8	FLYCATCHER INPUT WORD 6 - PHYSICAL MEMORY ADDRESS (MSBs)															
wd 9	FLYCATCHER INPUT WORD 7 - PHYSICAL MEMORY ADDRESS (LSBs)															
wd 10	FLYCATCHER INPUT WORD 8 - INCREMENT/DECREMENT SIZE															
wd 11	FLYCATCHER INPUT WORD 9															
wd 12	FLYCATCHER INPUT WORD 10															
wd 13	FLYCATCHER INPUT WORD 11															
wd 14	FLYCATCHER INPUT WORD 12															
wd 15	FLYCATCHER INPUT WORD 13															
wd 16	FLYCATCHER INPUT WORD 14															
wd 17	FLYCATCHER INPUT WORD 15															
wd 18	FLYCATCHER INPUT WORD 16															
wd 19	FLYCATCHER INPUT WORD 17															
wd 20	FLYCATCHER INPUT WORD 18															
wd 21	FLYCATCHER CONTROL WORD															
wd 22	NOT USED															
wd 23	NOT USED															
wd 24	NOT USED															
wd 25	NOT USED															
wd 26	NOT USED															
wd 27	NOT USED															
wd 28	NOT USED															
wd 29	NOT USED															
wd 30	NOT USED															
wd 31	NOT USED															
wd 32	NOT USED															

NAVY ONLY - INITIALIZATION BLOCK 58

80.1.2.16.1 Flycatcher Input Words 1-4 (Block 58, Words 3-6).

NAVY AIR ONLY

THESE WORDS ARE USED BY THE HOST TO PARTIALLY DESCRIBE THE CURRENT FLYCATCHER. THE TERMINAL WILL NOT PROCESS THESE WORDS EXCEPT TO REPEAT THEM IN WORDS 1-4 OF THE FORTHCOMING FLYCATCHER OUTPUT MESSAGES ON TOM 21.

80.1.2.16.2 Flycatcher Input Word 5 - Function Request (Block 58, Word 7).

NAVY AIR ONLY

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 7	FUNCTION REQUEST															

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-15	FUNCTION REQUEST - <u>NAVY AIR ONLY</u> 20 (HEX) = (ORDINARY) FLYCATCHER FUNCTION 40 (HEX) = INCREMENT REPORT ADDRESS FUNCTION 50 (HEX) = DECREMENT REPORT ADDRESS FUNCTION 60 (HEX) = DISABLE FLYCATCHER FUNCTION ALL OTHER VALUES ARE NOT USED.

80.1.2.16.3 Flycatcher Input Words 6-7 - Physical Memory Address (Block 58, Words 8-9).

<u>NAVY AIR ONLY</u>																
MSB													LSB			
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 8													M S B	ADDRESS		
wd 9	ADDRESS															L S B

The bit designation shall be as follows:

PHYSICAL MEMORY ADDRESS FOR DATA. - NAVY AIR ONLY

VALID RANGES: 00000 - 1BFFF₁₆
 1E000 - 23FFF₁₆
 64000 - 7BFFF₁₆

80.1.2.16.4 Flycatcher Input Word 8 - Increment/Decrement Size (Block 58, Word 10).

<u>NAVY AIR ONLY</u>																
MSB								LSB								
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 10	INCREMENT/DECREMENT SIZE															

The bit designation shall be as follows:

WHEN THE FUNCTION REQUEST (WORD 7) DESIGNATES INCREMENT OR DECREMENT FLYCATCHER ADDRESS (40 OR 50₁₆), THIS WORD SPECIFIES THE INCREMENT/DECREMENT SIZE. OTHERWISE, THIS WORD IS A "DON'T CARE". - NAVY AIR ONLY

80.1.2.16.5 Flycatcher Input Words 9-18 (Block 58, Words 10-20).

NAVY AIR ONLY

THESE WORDS PARTIALLY DESCRIBE THE CURRENT FLYCATCHER. THE TERMINAL WILL IGNORE THIS INFORMATION.

80.1.2.16.6 Flycatcher Control Word (Block 58, Word 21).

NAVY AIR ONLY

MSB																LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 21																F	C

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	FLYCATCHER CONTROL (FC) - <u>NAVY AIR ONLY</u> LOGIC 1 = ENABLE FLYCATCHER FORMAT FOR USE IN TERMINAL OUTPUT MESSAGE 21. LOGIC 0 = DISABLE FLYCATCHER FORMAT. (DEFAULT)

NOTE: THIS VARIABLE DETERMINES THE METHODOLOGY THAT THE SICP WILL USE IN TERMINAL OUTPUT MESSAGES 21-27 (SEE 80.1.4.7.3). WHEN FLYCATCHER IS ENABLED, TERMINAL OUTPUT MESSAGES 22-27 ARE NOT USED.

1-15 NOT USED

80.1.2.16 Deleted

80.1.2.17 Initialization Data Block 60. Not used by Navy.

80.1.2.18 Initialization Data Block 61. Not used by Navy.

80.1.2.19 Initialization Data Block 62. Not used by Navy.

80.1.2.21 Initialization Data Block 63.

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CHECKSUM (SEE 30.4.1.1)															
wd 2	CONTROL WORD FOR INITIALIZATION BLOCK 63 (SEE 30.4.1.2)															
wd 3	MODE CONTROL WORD															
wd 4	VOICE CHANNEL SELECT															
wd 5	CONTROL CHANNEL SELECT															
wd 6	RESET WORD															
wd 7	TIME OF DAY WORD 1															
wd 8	TIME OF DAY WORD 2															
wd 9	TIME OF DAY ERROR															
wd 10	TACAN CONTROL WORD 1 (<u>NAVY AIR ONLY</u>)															
wd 11	TACAN CONTROL WORD 2 (<u>NAVY AIR ONLY</u>)															
wd 12	TACAN CONTROL WORD 3 (<u>NAVY AIR ONLY</u>)															
wd 13	TACAN CONTROL WORD 4 (<u>NAVY AIR ONLY</u>)															
wd 14	IFF CODES WORD 1															
wd 15	IFF CODES WORD 2															
wd 16	IFF CODES WORD 3															
wd 17	NOT USED BY NAVY															
wd 18	NOT USED BY NAVY															
wd 19	NOT USED BY NAVY															
wd 20	RECEIVER/SYNTHESIZER CIRCUMVENTION															
wd 21	TADIL C ADDRESS (<u>NAVY AIR ONLY</u>)															
wd 22	NOT USED BY NAVY															
wd 23	NOT USED															
wd 24	NOT USED															
wd 25	NOT USED															
wd 26	NOT USED															
wd 27	NOT USED															
wd 28	NOT USED															
wd 29	NOT USED															
wd 30	NOT USED															
wd 31	NOT USED															
wd 32	NOT USED															

NAVY ONLY - INITIALIZATION BLOCK 63

80.1.2.21.1 Mode Control Word. (Block 63, Word 3)

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 3	L B S					X P O N D	I N T E					XMIT ANT	S N E	T O R D E	BIT	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-1	BIT COMMANDH (BIT)
	BIT 1 • 0 ••••••• 0 • 0 NORMAL - DEFAULT VALUE 0 • 1 WRA BIT COMMANDI 1 • 0 SRA BIT COMMANDI - <u>NAVY SHIP ONLY</u> 1 • 1 NOT USED
2	THERMAL OVERRIDE COMMAND (TORDE)H LOGIC 1 = THERMAL OVERRIDE LOGIC 0 = NO THERMAL OVERRIDE - DEFAULT VALUE
3	START NET ENTRY COMMAND (SNE) LOGIC 1 = START NET ENTRY LOGIC 0 = DO NOT START NET ENTRY - DEFAULT VALUE

- H A. IN ORDER FOR THE "TORDE" FIELD TO BE VALID, THE INPUT PRIORITY BIT (SEE 80.1.2.2.2) MUST BE SET TO LOGIC 0 (RESPONSE TO H/W AND S/W INPUTS). (NAVY AIR ONLY)
- B. THE "BIT" DATA FIELD IS ALWAYS STORED AS ZERO IN GLOBAL MEMORY.
- C. THE "TORDE" DATA FIELD IS ALWAYS STORED AS ZERO IN GLOBAL MEMORY. (NAVY AIR ONLY)
- I A REQUEST FOR WRA OR SRA BIT WILL BE IGNORED IF TERMINAL IS IN "PLATFORM IDENTIFIER REQUESTED" INITIALIZATION STATE OR IS IN LTTI.

BIT	<u>DESIGNATION</u>
-----	--------------------

4-5	TRANSMIT ANTENNA (XMIT ANT)
-----	-----------------------------

BIT	5	•	4	
-----	---	---	---	--

•	•	•	•	•	•	
---	---	---	---	---	---	--

0	•	0	DUAL ANTENNA CONFIGURATION
---	---	---	----------------------------

0	•	1	ANTENNA A - DEFAULT VALUE FOR F-14D
---	---	---	-------------------------------------

1	•	0	ANTENNA B - DEFAULT VALUE FOR <u>NAVY</u>
---	---	---	---

•			<u>SHIP</u> AND E-2C
---	--	--	----------------------

1	•	1	NOT USED
---	---	---	----------

NOTE: WHEN BLOCK 1, WORD 3, BITS 5-6 ARE BOTH SET TO "LOGIC 1", I.E.,
EXCITER OUTPUT CONTROL IS "EXCITER OUT J8", THE XMIT ANTENNA
MUST BE "ANTENNA B".

6-9	NOT USED
-----	----------

10	TACAN INTERROGATION (INTE) - <u>NAVY AIR ONLY</u> LOGIC 1 = NORMAL - DEFAULT LOGIC 0 = STOP INTERROGATION
----	---

11	TACAN TRANSPOND (XPOND) - <u>NAVY AIR ONLY</u> LOGIC 1 = NORMAL - DEFAULT LOGIC 0 = STOP TRANSPOND
----	--

12-14	NOT USED
-------	----------

15	LOOPBACK SELECT (LBS) LOGIC 1 = CPSM IF LOOPBACK LOGIC 0 = NORMAL RF LOOPBACK - DEFAULT
----	---

80.1.2.21.2 Voice Channel Select. (Block 63, Word 4)

MSB									LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 4		VOICE B CHANNEL								VOICE A CHANNEL						

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-6	VOICE A CHANNEL NET NUMBER 0-126 = ASSIGNED NET 127 = VOICE A CHANNEL ASSIGNMENTS ARE DEACTIVATED. DEFAULT VALUE = 127
7	NOT USED
8-14	VOICE B CHANNEL NET NUMBER 0-126 = ASSIGNED NET 127 = VOICE B CHANNEL ASSIGNMENTS ARE DEACTIVATED. DEFAULT VALUE = 127
15	NOT USED

NOTE: A CHANGE TO THE VOICE (OR CONTROL-SEE WORD 5) CHANNEL NETS MAY RESULT IN A CHANGE TO CHANNEL STATUS. TO LEARN THAT STATUS, IT IS NECESSARY FOR THE HOST TO USE TIM 16 (SEE 80.1.4.8.1.6.2) TO REQUEST STATUS BLOCK 3 (SEE 40.5.3).

80.1.2.21.3 Control Channel Select. (Block 63, Word 5)

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 5										CONTROL CHANNEL						

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-6	CONTROL CHANNEL NET NUMBER 0-126 = ASSIGNED NET 127 = CONTROL CHANNEL ASSIGNMENTS ARE DEACTIVATED. DEFAULT VALUE = 127
7-15	NOT USED

NOTE: SEE NOTE FOR BLOCK 63 WORD 4.

NAVY ONLY - INITIALIZATION BLOCK 63

80.1.2.21.4 Reset Word. (Block 63, Word 6)

	MSB													LSB		
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 6														I P F R	N A V R	N E R

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	NET ENTRY RESET (NER)* LOGIC 1 = REINITIATE NET ENTRY LOGIC 0 = DO NOT REINITIATE NET ENTRY - DEFAULT VALUE
1	NAVIGATION RESET (NAVR)* LOGIC 1 = PERFORM NAV RESET LOGIC 0 = DO NOT PERFORM NAV RESET - DEFAULT VALUE
2	IPF RESET (IPFR)* & ** LOGIC 1 = PERFORM IPF RESET LOGIC 0 = DO NOT PERFORM IPF RESET - DEFAULT VALUE
3-15	NOT USED

* THIS FIELD IS ALWAYS STORED AS ZERO IN GLOBAL MEMORY.

** SINCE THIS VARIABLE CAN ALSO BE SET BY A DISCRETE, THE "INPUT
PRIORITY BIT (SEE 80.1.2.2.2) IS RELEVANT. - NAVY AIR ONLY

NAVY ONLY - INITIALIZATION BLOCK 63

80.1.2.21.5 Time of Day Error. (Block 63, Word 9)

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 9	V A L				MINUTES						SECONDS					

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-5	TIME OF DAY ERROR SECONDS LSB: 1 SECOND VALID RANGE: 0-59 SECONDS DEFAULT VALUE: 0
6-11	TIME OF DAY ERROR MINUTES LSB: 1 MINUTE VALID RANGE: 0-59 MINUTES DEFAULT VALUE: 0
12-14	NOT USED
15	VALIDITY (VAL) LOGIC 1 = TIME OF DAY ERROR VALID LOGIC 0 = TIME OF DAY ERROR INVALID - DEFAULT VALUE
NOTES:	(1) A VALID TIME OF DAY ERROR OF LESS THAN 6 SECONDS WILL BE INTERPRETED AS AN ERROR OF SIX SECONDS. (2) IF THE TERMINAL HAS BEEN ASSIGNED AS THE NET TIME REFERENCE (VIA INITIALIZATION BLOCK 1 - SEE 30.4.2 OR VIA TIM 16 - SEE 80.1.4.8.1.6.2.3), THIS WORD IS A "DON'T CARE". (3) THE TERMINAL WILL SET THE VALIDITY BIT TO LOGIC 0 ("INVALID") AND THE TIME OF DAY ERROR TO 6 SECONDS IF NET ENTRY STATUS (SEE 80.1.4.8.2.1.2.4) CHANGES FROM "NET ENTRY HAS NOT BEEN INITIATED" TO "COARSE SYNC" OR "FINE SYNC."

NAVY ONLY - INITIALIZATION BLOCK 63

80.1.2.21.6 TACAN Control Words. (Block 63, Words 10 through 13)

NAVY AIR ONLY																	
MSB										LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 10	TACAN ANT PORT SEL			P W R T E S T	A / A	T / R R E C O N L Y	X / Y	P W R T E S T	CHANNEL								MODE/ CHANNEL SELECT
									HEX				BCD				
									80	40	20	10	8	4	2	1	
wd 11	0	0	0	D M E D L Y	ANTENNA DELAY B						ANTENNA DELAY A						ANT CABLE DELAY
wd 12	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	OUTPUT PARA- METERS
wd 13																	

The bit designation shall be as follows:

WORD 10 TACAN MODE/CHANNEL SELECT

BIT DESIGNATION

0-7 TACAN CHANNEL NUMBER* - NAVY AIR ONLY
1-126 = ASSIGNED CHANNEL
0: NO STATEMENT
1: DEFAULT
127 - 129: WILL RESULT IN A TACAN FAILURE INDICATION.

NAVY ONLY - INITIALIZATION BLOCK 63

BIT DESIGNATION

- 8 POWER TEST (PWR TEST)* - NAVY AIR ONLY
THIS IS A TWO (2) BIT FIELD. THE OTHER BIT OF THIS FIELD
IS LOCATED IN BIT 12 OF THIS WORD.
- BIT 12 • 8
 ••••••••
- | | | |
|---|-----|--------------------------|
| 0 | • 0 | OFF - DEFAULT |
| 0 | • 1 | LOGIC TEST ONLY |
| 1 | • 0 | NORMAL TACAN ON/TEST OFF |
| 1 | • 1 | COMPLETE TEST |
- 9 X MODE/Y MODE (X/Y)* - NAVY AIR ONLY
LOGIC 1 = X MODE - E-2C DEFAULT
LOGIC 0 = Y MODE - F-14D DEFAULT
- 10 TRANSMIT/RECEIVE - RECEIVE ONLY (T/R - REC ONLY)* - NAVY
AIR ONLY
LOGIC 1 = TRANSMIT/RECEIVE
LOGIC 0 = RECEIVE ONLY - DEFAULT
- 11 MODE (A/A)* - NAVY AIR ONLY
LOGIC 1 = AIR/AIR MODE
LOGIC 0 = GROUND/AIR MODE - DEFAULT
- 12 POWER TEST (PWR TEST)*. SEE BIT 8 OF THIS WORD. - NAVY AIR
ONLY
- 13 NOT USED
- 14-15 TACAN ANTENNA SELECT - NAVY AIR ONLY
- BIT 15 • 14
 ••••••••
- | | | |
|---|-----|--------------------------------|
| 0 | • 0 | AUTO ANTENNA SELECT - F-14D |
| | • | DEFAULT |
| 0 | • 1 | AUTO ANTENNA SELECT |
| 1 | • 0 | ANTENNA B |
| 1 | • 1 | ANTENNA A - E-2C DEFAULT VALUE |

* IF THE HOST SUPPLIES DATA THROUGH THE TACAN CONTROL PANEL, THE IU'S
TACAN PORT IGNORES BITS 0-12 OF THIS WORD. BITS 14-15 ARE ALWAYS
USED BY THE TACAN PORT.

WORD 11 TACAN ANTENNA CABLE DELAYBIT DESIGNATION

- 0-5 TACAN ANTENNA A CABLE DELAY - NAVY AIR ONLY
LSB: 166.6 NANOSECONDS
RANGE: 0 - 10495.8 NANOSECONDS
DEFAULT: 0

<u>BIT</u>	<u>DESIGNATION</u>
6-11	TACAN ANTENNA B CABLE DELAY - <u>NAVY AIR ONLY</u> LSB: 166.6 NANOSECONDS RANGE: 0 - 10495.8 NANOSECONDS DEFAULT: 0
12	DME DELAY (GROUND-TO-AIR Y MODE) - <u>NAVY AIR ONLY</u> LOGIC 1 = 74 MICROSECONDS (US) - DEFAULT LOGIC 0 = 56 MICROSECONDS (UK)
13-15	SET TO LOGIC 0
<u>WORD 12</u>	<u>OUTPUT PARAMETER</u> SELECTS TACAN WORDS TO BE OUTPUT BY R/T (WORD 1 THROUGH 16) - <u>NAVY AIR ONLY</u>
<u>BIT</u>	<u>DESIGNATION</u>
0-15	LOGIC 1 = PROVIDE CORRESPONDING TACAN OUTPUT WORD - DEFAULT VALUE LOGIC 0 = DO NOT PROVIDE CORRESPONDING TACAN OUTPUT WORD.
NOTES: (1)	TACAN WORDS 1-16 ARE DEFINED (AS WORDS 3-18) IN STATUS BLOCK 14 (SEE 40.5.13).
(2)	SEE NOTATIONS IN PARAGRAPH 50.1.2.2.3 (OUTPUT WORD SELECT).
<u>WORD 13</u>	
<u>BIT</u>	<u>DESIGNATION</u>
0-15	SPARE

NAVY ONLY - INITIALIZATION BLOCK 63

80.1.2.21.7 Block 63, Words 17-18. Not used by Navy.

80.1.2.21.8 Block 63, Word 19. Not used by Navy.

80.1.2.21.9 Receiver/Synthesizer Circumvention. (Block 63, Word 20)

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 20																R / S

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	RECEIVER/SYNTHESIZER CIRCUMVENTION (R/S) LOGIC 1 = MONITOR R/S PERFORMANCE AND CIRCUMVENT LOGIC 0 = DO NOT MONITOR R/S PERFORMANCE - DEFAULT VALUE
1-15	NOT USED

80.1.2.21.10 TADIL C Address. (Block 63, Word 21)

MSB																LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 21	T C A I	TADIL C ADDRESS															

The bit designation shall be as follows:

TADIL C ADDRESS AND TADIL C ADDRESS INDICATOR (TCAI) AS DEFINED IN
Y256C052 AND JTIDS TIDP. - NAVY AIR ONLY

F-14D DEFAULT FOR TADIL C ADDRESS = 00000 (OCTAL)

F-14D DEFAULT FOR TCAI = "DO NOT INTERPRET"

NAVY ONLY - INITIALIZATION BLOCK 63

80.1.3 Navy Shipboard and Navy Airborne Useage of Appendix IV. This section contains the changes for Navy Shipboard and Navy Airborne against Appendix IV.

NAVY ONLY - STATUS BLOCKS

80.1.3.1 Ongoing Status (Block 1).

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CONTROL WORD															
wd 2	ADDRESS WORD															
wd 3	ONGOING STATUS WORD 1															
wd 4	ONGOING STATUS WORD 2															
wd 5	NET SELECTION STATUS WORD 1 (<u>NAVY AIR ONLY</u>)															
wd 6	NET SELECTION STATUS WORD 2 (<u>NAVY AIR ONLY</u>)															
wd 7	CHECKSUM ERROR WORD 1															
wd 8	CHECKSUM ERROR WORD 2															
wd 9	CHECKSUM ERROR WORD 3															
wd 10	CHECKSUM ERROR WORD 4															
wd 11	VALIDITY ERROR WORD 1															
wd 12	VALIDITY ERROR WORD 2															
wd 13	VALIDITY ERROR WORD 3															
wd 14	VALIDITY ERROR WORD 4															
wd 15	BLOCK COUNT ERROR AND TSR POOL VALIDITY WORD															
wd 16	NOT USED															
wd 17	NOT USED															
wd 18	NOT USED															
wd 19	NOT USED															
wd 20	NOT USED															
wd 21	NOT USED															
wd 22	NOT USED															
wd 23	NOT USED															
wd 24	NOT USED															
wd 25	NOT USED															
wd 26	NOT USED															
wd 27	NOT USED															
wd 28	NOT USED															
wd 29	NOT USED															
wd 30	NOT USED															
wd 31	NOT USED															
wd 32	NOT USED															

NAVY ONLY - STATUS BLOCK 1

80.1.3.1.1 Ongoing Status Word 1 (Block 1, Word 3)

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 3	T S T F	T G	T E R M F	S D U A L	I P F F	D E G P R	T A C F	M F		H F	T O R D E	T O L D	B A T F	N I C P	S I C P	

BITDESIGNATION

- 0 NOT USED
- 1 SICP DEGRADED PERFORMANCE INDICATOR (SICP)
LOGIC 1 = TIME OVERLOAD, NO INTERNAL BUFFERS,
FLOATING POINT OVERFLOW, DIVIDE BY ZERO, OR
NEGATIVE SQUARE ROOT HAS BEEN DETECTED IN
THE SICP.
- 2 NICP DEGRADED PERFORMANCE INDICATOR (NICP)
LOGIC 1 = TIME OVERLOAD, NO INTERNAL BUFFERS,
FLOATING POINT OVERFLOW, DIVIDE BY ZERO, OR
NEGATIVE SQUARE ROOT HAS BEEN DETECTED IN
THE NICP.
- 3 BATTERY FAIL (BATF)
LOGIC 1 = BATTERY UNIT HAS FAILED.
- 4 THERMAL OVERLOAD (TOLD)
LOGIC 1 = THERMAL OVERLOAD CONDITION EXISTS IN THE
HPA OR R/T PA.
- 5 THERMAL OVERRIDE (TORDE)
LOGIC 1 = TERMINAL IS OPERATING IN THE THERMAL
OVERRIDE CONDITION.
- 6 HOST FAIL (HF)
LOGIC 1 = THE SICP HAS NOT RECEIVED A VALID TERMINAL
INPUT MESSAGE IN THE LAST 12 SECONDS.
- NOTE: THE HOST CANNOT, VIA THE MUX, OBSERVE THIS VARIABLE IN THE
LOGIC 1 STATE.
- 7 NOT USED BY NAVY

NAVY ONLY - STATUS BLOCK 1

<u>BIT</u>	<u>DESIGNATION</u>
8	MESSAGE FAIL (MF) LOGIC 1 = MESSAGE FAIL (ANY BIT IN MESSAGE STATUS WORD OF STATUS BLOCK 8. SEE 80.1.3.6.3).
9	TACAN FAIL (TACF) - <u>NAVY AIR ONLY</u> LOGIC 1 = TACAN FAIL
10	DEGRADED PERFORMANCE (DEGPR) LOGIC 1 = DEGRADED PERFORMANCE (ANY BIT IN DEGRADED PERFORMANCE WORD OF STATUS BLOCK 8. SEE 80.1.3.6.13).
11	IPF FAIL (IPFF) LOGIC 1 = AN INTERFERENCE PROTECTION FEATURE FAILURE HAS BEEN DETECTED.
12	SDU ALERT (SDUAL) LOGIC 1 = AN SDU ALARM OR BAD VARIABLE HAS BEEN DETECTED.
13	TERMINAL FAIL (TERMF) LOGIC 1 = A DDP, R/T, IU, BATTERY, LOOPBACK, HPAG OR IPF FAIL HAS BEEN DETECTED.
14	TEST GO (TG) LOGIC 1 = MANUAL BIT IS COMPLETE AND ALL TESTS HAVE PASSED.
15	TEST FAIL (TSTF) LOGIC 1 = <u>NAVY AIR ONLY</u> - A WRA FAILURE, TERMINAL FAIL, SDU ALERT, IPF FAIL, OR DEGRADED PERFORMANCE HAS BEEN DETECTED. APPLIES ONLY TO MANUAL BIT AND COMES AT THE END OF THE PROCESS. LOGIC 1 = <u>NAVY SHIP ONLY</u> - A WRA FAILURE, TERMINAL FAIL, SDU ALERT, IPF FAIL OR DEGRADED PERFORMANCE HAS BEEN DETECTED DURING WRA BIT; OR AN SRA FAILURE HAS BEEN DETECTED DURING SRA BIT. APPLIES ONLY TO MANUAL BIT AND COMES AT THE END OF THE PROCESS.

NAVY ONLY - STATUS BLOCK 1

80.1.3.1.2 Ongoing Status Word 2 (Block 1, Word 4)

	MSB														LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 4	B I P	B L	D C	I D R	I C			N F S	N S		P I	B R	V T	B D R N V		

BITDESIGNATION

0-1

SPARE

2

BIT DATA RESULTS NOT VALID (BDRNV) - NAVY AIR ONLY
 LOGIC 1 = MANUAL BIT DATA RESULTS ARE NOT VALID SINCE
 A MOMENTARY TRANSMIT INHIBIT WAS ACTIVATED
 DURING THE MANUAL BIT PROCESS.

3

VALIDITY TEST IN PROGRESS (VT)
 LOGIC 1 = AN INITIALIZATION DATA LOAD HAS BEEN
 RECEIVED BY THE TERMINAL AND DPG VALIDITY
 TESTING IS IN PROGRESS.

4

BIT REFUSAL (BR)
 LOGIC 1 = NAVY AIR ONLY - A REQUEST FOR WRA BIT HAS
 BEEN REFUSED SINCE LONG TERM TRANSMIT
 INHIBIT IS IN EFFECT.
 LOGIC 1 = NAVY SHIP ONLY - A REQUEST FOR WRA BIT OR
 SRA BIT HAS BEEN REFUSED SINCE LONG TERM
 TRANSMIT INHIBIT IS IN EFFECT.

NOTE: ONCE THIS BIT HAS BEEN SET TO LOGIC 1, IT WILL NOT BE SET
 BACK TO LOGIC 0 UNTIL A WRA BIT (OR IN THE CASE OF NAVY
SHIP A WRA BIT OR SRA BIT) COMMAND HAS BEEN ACCEPTED BY
 THE IU (AT THIS POINT BIT 15 OF THIS WORD WILL BE SET TO
 LOGIC 1).

5

PLATFORM IDENTIFIER REQUESTED (PI)
 LOGIC 1 = PLATFORM IDENTIFIER (BLOCK 0) REQUESTED

6

NOT USED BY NAVY

7

NO COARSE SYNC (NS)
 LOGIC 1 = NET ENTRY HAS BEEN INITIATED, BUT COARSE
 SYNC HAS NOT YET BEEN ACHIEVED; I.E., THE
 FIRST NET ENTRY MESSAGE HAS NOT YET BEEN
 RECEIVED.

NAVY ONLY - STATUS BLOCK 1

<u>BIT</u>	<u>DESIGNATION</u>
8	NO FINE SYNC (NFS) LOGIC 1 = COARSE SYNC HAS BEEN ACHIEVED, BUT FINE SYNC HAS NOT BEEN ACHIEVED. TERMINAL MAY TRANSMIT ONLY RTT MESSAGES.
9	NOT USED BY NAVY
10	NOT USED BY NAVY
11	INITIALIZATION COMPLETE (IC) LOGIC 1 = INITIALIZATION DATA LOAD HAS BEEN ACCEPTED (OR THE HOST HAS SUBMITTED A START NET ENTRY COMMAND (SEE 30.4.23.1) FOLLOWING A BAD LOAD) BY TERMINAL BUT NET ENTRY HAS NOT BEEN INITIATED.
12	INITIALIZATION DATA REQUIRED (IDR) LOGIC 1 = INITIALIZATION DATA REQUIRED
13	DATA CONFLICT (DC) LOGIC 1 = THE DPG FOUND A VALIDITY ERROR IN THE LAST INITIALIZATION DATA CHANGE SUBMITTED BY THE HOST. (SEE 80.1.4.6.1.3)
14	BAD LOAD (BL) LOGIC 1 = INITIALIZATION DATA LOAD RECEIVED IN ERROR.
15	BIT IN PROCESS (BIP) LOGIC 1 = MANUAL BIT IN PROGRESS
NOTE:	IN THIS WORD, BITS 3, 5, 7, 8, 11, 12, 13 AND 14 ARE MUTUALLY EXCLUSIVE.

NAVY ONLY - STATUS BLOCK 1

80.1.3.1.3 Net Selection Status Word 1. (Block 1, Word 5).

<u>NAVY AIR ONLY</u>																
MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 5		RNPG									NSC				NSS	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-1	NET SELECTION STATUS (NSS) - <u>NAVY AIR ONLY</u>
BIT 1 • 0	
• • • • •	
0 • 0	NO STATEMENT
0 • 1	REQUEST IN PROGRESS
1 • 0	REQUEST EXECUTED
1 • 1	REQUEST REJECTED
2-5	NET SELECTION COUNTER (NSC) - <u>NAVY AIR ONLY</u> THE COUNTER (INCREMENTED BY 1 EACH TIME A NEW NET SELECTION REQUEST IS RECEIVED) USED TO IDENTIFY THE NET SELECTION REQUEST THAT IS DESCRIBED IN THIS WORD AND THE NEXT WORD. RANGE: 0 - 15
6-14	NPG FOR WHICH THE NET CHANGE WAS REQUESTED (RNPG) - <u>NAVY AIR ONLY</u> RANGE: 0 - 511 IF RNPG = 0, A CHANGE OF THE DEFAULT NET WAS REQUESTED.
15	SPARE

NOTE: NET SELECTION IS REQUESTED EITHER BY INITIALIZATION BLOCK 57 (SEE 80.1.2.15) OR TIM 16, WORDS 16 AND 17 (SEE 80.1.4.8.1.6.2.11).

80.1.3.1.4 Net Selection Status Word 2. (Block 1, Word 6).

<u>NAVY AIR ONLY</u>																
MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 6										RNET						

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-6	REQUESTED NET NUMBER (RNET) - <u>NAVY AIR ONLY</u> RANGE: 0 - 127
7-15	SPARE

NAVY ONLY - STATUS BLOCK 1

80.1.3.1.5 Checksum Error Words 1-4 (Block 1, Words 7-10).

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 7	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 8	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
wd 9	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
wd 10	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48

LOGIC 1 = A CHECKSUM ERROR WAS FOUND IN THE CORRESPONDING
INITIALIZATION BLOCK.

LOGIC 0 = A CHECKSUM ERROR WAS NOT FOUND IN THE
CORRESPONDING INITIALIZATION BLOCK.

NOTE: THESE WORDS ARE VALID WHEN INITIALIZATION STATUS (IN
TERMINAL OUTPUT MESSAGE 1, WORD 4; SEE 80.1.4.8.2.1.2.4)
IS SET TO "LOAD COMPLETE - LOAD ERROR DETECTED", OR,
EQUIVALENTLY, BIT 14 OF ONGOING STATUS WORD 2 (SEE
80.1.3.1.2) IS SET TO LOGIC 1.

NAVY ONLY - STATUS BLOCK 1

80.1.3.1.6 Validity Error Words 1-4 (Block 1, Words 11-14). These words have the same format and are valid at the same time as words 7-10.

LOGIC 1 = A VALIDITY ERROR WAS FOUND IN THE CORRESPONDING
INITIALIZATION BLOCK.

LOGIC 0 = A VALIDITY ERROR WAS NOT FOUND IN THE CORRESPONDING
INITIALIZATION BLOCK.

NOTE: INITIALIZATION BLOCKS 16-19, 21-22, 56 AND 59 HAVE NO VALIDITY
CHECKS AND SO WILL NEVER GENERATE A VALIDITY ERROR.

NAVY ONLY - STATUS BLOCK 1

80.1.3.1.7 Block Count Error and TSR POOL VALIDITY Word (Block 1, Word 15).

MSB									LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 15		B C E							V ₇	V ₆	V ₅	V ₄	V ₃	V ₂	V ₁	V ₀

<u>BIT</u>	<u>DESIGNATION</u>
0-7	TSR POOL VALIDITY BITS. SEE TOM 1, WORD 8 (80.1.4.8.2.1.2.8) FOR A DESCRIPTION OF THESE BITS.
8-13	SPARE
14	BLOCK COUNT ERROR (BCE) LOGIC 1 = A BLOCK COUNT ERROR WAS FOUND IN THE INITIALIZATION LOAD. LOGIC 0 = A BLOCK COUNT ERROR WAS NOT FOUND IN THE INITIALIZATION LOAD.
NOTE: THIS BIT IS VALID AT THE SAME TIME AS WORDS 7-14.	
15	SPARE

NAVY ONLY - STATUS BLOCK 1

80.1.3.2 NICP Status Report Number 1 (Block 2)

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CONTROL WORD (SEE 40.5.1.1)															
wd 2	ADDRESS WORD (SEE 40.5.1.2)															
wd 3	12 SECOND MESSAGE STATUS WORD 1															
wd 4	12 SECOND MESSAGE STATUS WORD 2															
wd 5	12 SECOND MESSAGE STATUS WORD 3															
wd 6	12 SECOND MESSAGE STATUS WORD 4															
wd 7	12 SECOND MESSAGE STATUS WORD 5															
wd 8	12 SECOND MESSAGE STATUS WORD 6															
wd 9	12 SECOND MESSAGE STATUS WORD 7															
wd 10	12 SECOND MESSAGE STATUS WORD 8															
wd 11	12 SECOND MESSAGE STATUS WORD 9															
wd 12	12 SECOND MESSAGE STATUS WORD 10															
wd 13	12 SECOND MESSAGE STATUS WORD 11															
wd 14	MODE WORD															
wd 15	BIT WORD 1															
wd 16	BIT WORD 2															
wd 17	CRYPTO AND RELAY STATUS															
wd 18	TRANSMITTED QUALITY AND OTAR STATUS															
wd 19	SYNC STATUS															
wd 20	SUMMED CLOCK BIAS WORD 1															
wd 21	SUMMED CLOCK BIAS WORD 2															
wd 22	HARDWARE FREQUENCY CORRECTION															
wd 23	JTIDS TOD WORD 1/TRANSMISSION SHUTDOWN INDICATOR WORD															
wd 24	JTIDS TIME OF DAY WORD 2															
wd 25	JTIDS TIME OF DAY WORD 3															
wd 26	NO. OF ILLEGAL INSTRUCTION INTERRUPTS															
wd 27	NO. OF ILLEGAL CPU CLOCK STATE INTERRUPTS															
wd 28	LOOPBACK MESSAGE TYPE FAILURES															
wd 29	OTF CONSTANT FREQ. OFFSET STATE WORD 1															
wd 30	OTF CONSTANT FREQ. OFFSET STATE WORD 2															
wd 31	REL NAV KALMAN FILTER STATUS 1															
wd 32	KALMAN FILTER QUALITIES															

NAVY ONLY - STATUS BLOCK 2

80.1.3.2.112 Second Message Status Words. (Block 2, Words 3 through 13)

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 3	NO. OF SUCCESSFUL TRANSMISSIONS RECEIVED DURING LAST REPORTING INTERVAL (DOES NOT INCLUDE RTT'S)															
wd 4	NO. OF RTT INTERROGATIONS TRANSMITTED															
wd 5	NO. OF RTT REPLIES RECEIVED															
wd 6	NO. OF TRANSMISSIONS RECEIVED IN ERROR															
wd 7	NO. OF MESSAGES NOT ACKNOWLEDGED															
wd 8	NO. OF LOOPBACK DECODE FAILS															
wd 9	NO. OF LOOPBACK TOA FAILS															
wd 10	NO. OF LOOPBACK FAILS (NO LOOPBACK)															
wd 11	NO. OF SUCCESSFUL LOOPBACKS															
wd 12	NO. OF TEST MESSAGE BIT-BY-BIT COMPARE FAILS															
wd 13	NO. OF SUCCESSFULLY RECEIVED TEST MESSAGES															

RANGE: 0 TO 1536

80.1.3.2.2 Mode Word. (Block 2, Word 14)

MSB							LSB									
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 14	M T I	IPF FAILURE					IPF OVER		COMM MODE			TEST MODE		XMIT MODE		
		U T F	R E F	P W F	F S F	P L F										

The bit designation shall be as follows:

BIT DESIGNATION

0-2 TRANSMISSION MODE (XMIT MODE)

BIT	2	•	1	•	0	
	•	•	•	•	•	
	0	•	0	•	0	TDMA OFF
	0	•	0	•	1	NORMAL
	0	•	1	•	0	POLLING
	0	•	1	•	1	NOT USED
	1	•	0	•	0	DATA SILENT
	1	•	0	•	1	NOT USED
	1	•	1	•	0	NOT USED
	1	•	1	•	1	LONG TERM TRANSMIT INHIBIT

<u>BIT</u>	<u>DESIGNATION</u>
5-7	COMMUNICATIONS MODE (COMM MODE)
	BIT 7 . 6 . 5 0 . 0 . 0 NOT USED 0 . 0 . 1 A/J MODE 1 0 . 1 . 0 A/J MODE 2 0 . 1 . 1 NOT USED 1 . 0 . 0 A/J MODE 4 1 . 0 . 1 NOT USED 1 . 1 . 0 NOT USED 1 . 1 . 1 NOT USED
8-9	IPF OVERRIDE (IPF OVER)
	BIT 9 . 8 0 . 0 OFF, 40/20 RULE 0 . 1 EXERCISE 1 . 0 COMBAT 1 . 1 OFF, 100/50 RULE
15	MOMENTARY TRANSMIT INHIBIT (MTI) - <u>NAVY AIR ONLY</u> LOGIC 1 = MOMENTARY TRANSMIT INHIBIT WAS INVOKED AT LEAST ONCE IN THE LAST 12-SECOND INTERVAL TO SUPPRESS TDMA OUTPUTS LOGIC 0 = MOMENTARY TRANSMIT INHIBIT WAS NOT INVOKED
NOTE:	<u>NAVY AIR ONLY</u> - IF AN MTI OCCURS IN THE LAST ONE OR TWO SLOTS OF A 12-SECOND PERIOD, IT MAY BE REPORTED IN ITS OWN AND IN THE NEXT PERIOD.

NAVY ONLY - STATUS BLOCK 2

80.1.3.2.3 BIT Word 1 (Block 2, Word 15)

MSB														LSB		
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 15			T F C	G M A F	G M F	P I R		C H F	S Q N	D V Z	O V S	N B A	T O	R O M F	R A M F	C P U F

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = CPU FAILURE (CPUF)
1	LOGIC 1 = RAM FAILURE (RAMF)
2	LOGIC 1 = ROM FAILURE (ROMF)
3	LOGIC 1 = TIME OVERLOAD (TO)
4	LOGIC 1 = NO BUFFERS AVAILABLE (NBA)
5	LOGIC 1 = FLOATING POINT OVERFLOW (OVS)
6	LOGIC 1 = FLOATING POINT DIVIDE BY ZERO (DVZ)
7	LOGIC 1 = SQUARE ROOT NEGATIVE ARGUMENT (SQN)
8	LOGIC 1 = CHRONOMETER FAIL (CHF)
9	NOT USED
10	LOGIC 1 = POSITION INITIALIZATION REQUIRED (PIR)
11	LOGIC 1 = GLOBAL MEMORY FAILURE (GMF)
12	LOGIC 1 = GLOBAL MEMORY ADDRESS FAILURE (GMAF)
13	LOGIC 1 = ASSIGNMENT PENDING TABLE FULL (TFC)
14	NOT USED BY NAVY
15	NOT USED

NAVY ONLY - STATUS BLOCK 2

80.1.3.2.4 BIT Word 2 (Block 2, Word 16)

	MSB										LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 16						C T P	I D T B	T S F	D T B	D T B N A	U D T B	S I C P F	R T F	T M W F	F R T	P T P F

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = PLAIN TEXT PROCESSOR FAIL (PTPF)
1	LOGIC 1 = FREEZE TIME (FRT)
2	LOGIC 1 = TUNE MODE WRAPAROUND FAIL (TMWF)
3	LOGIC 1 = R/T FAIL (RTF)
4	LOGIC 1 = SICP FAIL (SICPF)
5	LOGIC 1 = UNIDENTIFIABLE DTB (UDTB)
6	LOGIC 1 = DTB NOT ACKNOWLEDGED (DTBNA)
7	LOGIC 1 = DTB FULL (DTB)
8	LOGIC 1 = TASK SCHEDULE FAIL (TSF)
9	LOGIC 1 = INVALID DTB START WORD (IDTB)
10	LOGIC 1 = CYPHER TEXT PROCESSOR FULL (CTP)
11-15	NOT USED

80.1.3.2.5 Crypto and Relay Status Word (Block 2, Word 17)

MSB													LSB			
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 17					CRYPTO STATUS									C O N R	V N R	M N R

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = ACTIVE MAIN NET RELAY (MNR) NAVY ONLY - STATUS BLOCK 2

<u>BIT</u>	<u>DESIGNATION</u>
1	LOGIC 1 = ACTIVE VOICE NET RELAY (VNR)
2	LOGIC 1 = ACTIVE CONTROL NET RELAY (CONR)
3-11	CRYPTO STATUS
	BIT 3=1 SDU VARIABLE 0 BAD
	BIT 4=1 SDU VARIABLE 1 BAD
	BIT 5=1 SDU VARIABLE 2 BAD
	BIT 6=1 SDU VARIABLE 3 BAD
	BIT 7=1 SDU VARIABLE 4 BAD
	BIT 8=1 SDU VARIABLE 5 BAD
	BIT 9=1 SDU VARIABLE 6 BAD
	BIT 10=1 SDU VARIABLE 7 BAD
	BIT 11=1 SDU ALARM
NOTE:	SEE 80.1.3.6.12 FOR A DESCRIPTION OF THESE CRYPTO STATUS BITS
12-15	NOT USED BY NAVY

80.1.3.2.6 Sync Status Word (Block 2, Word 19)

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 19	N T R	E T R	RTT SUM- MARY		ETR SUM- MARY		N S O V F		S F R	SYNC MODE			SYNC STATUS			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
4-6	SYNC MODE
BIT	6 . 5 . 4

	0 . 0 . 0 NO FILTER (I.E., NTR WITHOUT ETR)
	. .
	0 . 0 . 1 ACTIVE SYNC
	0 . 1 . 0 SECONDARY USER
	1 . 0 . 0 DATA SILENT (PASSIVE SYNC)
	OTHER VALUES NOT USED

80.1.3.2.7 JTIDS Time of Day Word 1/Transmission Shutdown Indicator Word
(Block 2, Word 23)

MSB						LSB										
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 23	T A C	N S	H I P F F	X D F E	N F S											SET

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
11-15	TRANSMISSION SHUTDOWN INDICATORS
BIT 11	= 1 FINE SYNC NOT ACHIEVED (NFS)
BIT 12	= 1 TRANSMIT DUTY FACTOR EXCEEDED (XDFE)
BIT 13	= 1 HARDWARE IPF FAILURE (HIPFF)
BIT 14	= 1 COARSE SYNC NOT ACHIEVED (NS)
BIT 15	= 1 TACAN ONLY (TAC) - <u>NAVY AIR ONLY</u>

80.1.3.3 SICP Status Report (Block 3).

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CONTROL WORD (SEE 40.5.1.1)															
wd 2	ADDRESS WORD (SEE 40.5.1.2)															
wd 3	HOST AND RELAY INHIBIT STATUS															
wd 4	NOT USED BY NAVY															
wd 5	NOT USED BY NAVY															
wd 6	VOICE A CHANNEL WORD 1															
wd 7	VOICE A CHANNEL WORD 2															
wd 8	VOICE A CHANNEL WORD 3															
wd 9	VOICE B CHANNEL WORD 1															
wd 10	VOICE B CHANNEL WORD 2															
wd 11	VOICE B CHANNEL WORD 3															
wd 12	CONTROL CHANNEL WORD 1															
wd 13	CONTROL CHANNEL WORD 2															
wd 14	RESERVED FOR NICP/SICP USE															
wd 15	NOT USED															
wd 16	NOT USED															
wd 17	NOT USED															
wd 18	NOT USED															
wd 19	NOT USED															
wd 20	NOT USED															
wd 21	NOT USED															
wd 22	NOT USED															
wd 23	NOT USED															
wd 24	NOT USED															
wd 25	NOT USED															
wd 26	NOT USED															
wd 27	NOT USED															
wd 28	NOT USED															
wd 29	NOT USED															
wd 30	NOT USED															
wd 31	NOT USED															
wd 32	NOT USED															

NAVY ONLY - STATUS BLOCK

80.1.3.3.2 Voice A Channel Word 1. (Block 3, Word 6)

MSB											LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 6	A C					STAT			S N	VOICE A NET						

The bit designation shall be as follows:

BITDESIGNATION

8-10

CHANNEL STATUS (STAT)

BITS 10 • 9 • 8

● ● ● ● ● ● ● ● ● ● ● ●

$$0 \cdot 0 \cdot 0$$

OPERATIONAL

$$0 \cdot 0 \cdot 1$$

NET SELECTED SHUTDOWN

$$0 \cdot 1 \cdot 0$$

BIT-DETECTED FAULT

$$0 \cdot 1 \cdot 1$$

NO STATEMENT

$$1 \cdot 0 \cdot 0$$

INSUFFICIENT SLOTS ASSIGNED

$$1 \cdot 0 \cdot 1$$

INSUFFICIENT SLOTS DUE TO PACK

$$1 \cdot 1 \cdot 0$$

INSUFFICIENT SLOTS DUE TO IPF

$$1 \cdot 1 \cdot 1$$

SPARE

15

VOICE A CHANNEL CHANGE (AC)

FOR INTERNAL SICP/NICP USE

80.1.3.3.3 Voice A Channel Word 3. (Block 3, Word 8)

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 8	S L S	P T	PL				RATE		C D	M D	SSAEA					

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
8-9	CHANNEL RATE (RATE)
BITS	9 • 8
	• • • • •
	0 • 0 16 KBPS
	1 • 1 NO STATEMENT

THE OTHER VALUES ARE NOT USED BY NAVY

80.1.3.4 D/R Navigation Data (Block 4).

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CONTROL WORD (SEE 40.5.1.1)															
wd 2	ADDRESS WORD (SEE 40.5.1.2)															
wd 3	D/R TIME TAG															
wd 4	D/R INTRACYCLE TIME															
wd 5	D/R VALIDITY WORD															
wd 6	LATITUDE (D/R) WORD 1															
wd 7	LATITUDE (D/R) WORD 2															
wd 8	LONGITUDE (D/R) WORD 1															
wd 9	LONGITUDE (D/R) WORD 2															
wd 10	ALTITUDE (D/R) WORD 1															
wd 11	ALTITUDE (D/R) WORD 2															
wd 12	X SPEED (D/R) WORD 1															
wd 13	X SPEED (D/R) WORD 2															
wd 14	Y SPEED (D/R) WORD 1															
wd 15	Y SPEED (D/R) WORD 2															
wd 16	Z SPEED (D/R) WORD 1															
wd 17	Z SPEED (D/R) WORD 2															
wd 18	X-AXIS AZIMUTH WORD 1															
wd 19	X-AXIS AZIMUTH WORD 2															
wd 20	ΔV_x WORD 1															
wd 21	ΔV_x WORD 2															
wd 22	ΔV_y WORD 1															
wd 23	ΔV_y WORD 2															
wd 24	ΔV_z WORD 1															
wd 25	ΔV_z WORD 2															
wd 26	Ω_x WORD 1															
wd 27	Ω_x WORD 2															
wd 28	Ω_y WORD 1															
wd 29	Ω_y WORD 2															
wd 30	Ω_z WORD 1															
wd 31	Ω_z WORD 2															
wd 32																

NAVY ONLY - STATUS BLOCK 4

80.1.3.4.1 D/R Validity Word (Block 4, Word 5)

MSB											LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 5	NS		DM				V 9	V 8	V 7	V 6	V 5	V 4	V 3	V 2	V 1	V 0

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = LATITUDE VALID (V0)
1	LOGIC 1 = LONGITUDE VALID (V1)
2	LOGIC 1 = ALTITUDE VALID (V2)
3	LOGIC 1 = X AND Y SPEEDS VALID (V3)
NOTE: FOR <u>NAVY SHIP ONLY</u> , RELEVANT ONLY IF DAMPING MODE IS "NO DAMPING"; ELSE THIS BIT IS SET TO "INVALID".	
4	LOGIC 1 = Z SPEED VALID (V4)
5	LOGIC 1 = X-AXIS AZIMUTH VALID (V5)
6	LOGIC 1 = ΔV_x , ΔV_y , AND ΔV_z VALID (V6)
7	LOGIC 1 = Ω_x , Ω_y , AND Ω_z VALID (V7)
8	LOGIC 1 = X, Y, AND Z AXIS SLEW (SEE 40.5.5) VALID (V8)
9	LOGIC 1 = LEVER ARM (SEE 40.5.5) VALID (V9) - <u>NAVY SHIP ONLY</u>
10-11	RESERVED FOR SICP USE

NAVY ONLY - STATUS BLOCK 4

<u>BIT</u>	<u>DESIGNATION</u>
12-13	DAMPING MODE (DM) - <u>NAVY SHIP ONLY</u>

BITS	13	•	12	
	•	•	•	•
	0	•	0	NO DAMPING
	0	•	1	FREE INERTIAL
	1	•	0	DAMPED MODE 1
	1	•	1	DAMPED MODE 2

14-15	NAV STATE (NS)
-------	----------------

BITS	15	•	14	
	•	•	•	•
	0	•	0	START-UP WITH D/R
	0	•	1	NORMAL
	1	•	0	FLYWHEEL
	1	•	1	NOT USED

80.1.3.4.2 X Speed (D/R) Words (Block 4, Words 12 and 13) REAL (See Table IV-II)

UNITS: Feet per second

DEFINITION: System estimate of speed in X direction. X, Y, Z are local vertical earth-referenced coordinates, nominally north, west, up, respectively, when X-axis azimuth is 0.0 degrees.

For NAVY SHIP ONLY, if NAV State is START-UP or Damping Mode is NO DAMPING, reference speed in X direction (if NAV state is not START-UP and Damping Mode is not NO DAMPING).

80.1.3.4.3 Y Speed (D/R) Words (Block 4, Words 14 and 15) REAL (See Table IV-II)

UNITS: Feet per second

DEFINITION: System estimate of speed in Y direction.

For NAVY SHIP ONLY, If NAV State is START-UP or Damping Mode is NO DAMPING, reference speed in Y direction (if NAV state is not START-UP and Damping Mode is not NO DAMPING).

80.1.3.5 Status Block 780.1.3.5.1 North Speed of Medium (Vwn) Words or (for Navy Ship Only) X-Damping State (Vbx) (Block 7, Words 16 and 17) REAL (See Table IV-II)

UNITS: Feet per second

DEFINITION: For NAVY SHIP ONLY, estimated x-velocity damping error (inertial systems only) or estimated water motion speed in North direction (non-inertial systems only).

For NAVY AIR ONLY, estimated air mass speed in North direction (non-inertial systems only).

80.1.3.5.2 West Speed of Medium (Vww) Words or (for Navy Ship Only) Y-Damping State (Vby) (Block 7, Words 18 and 19) REAL (See Table IV-II)

UNITS: Feet per second

DEFINITION: For NAVY SHIP ONLY, estimated y-velocity damping error (inertial systems only) or estimated water motion speed in West direction (non-inertial systems only).

For NAVY AIR ONLY, estimated air mass speed in West direction (non-inertial systems only).

NAVY ONLY - STATUS BLOCK 7

80.1.3.5 BIT Status Report. (Block 8)

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CONTROL WORD (SEE 40.5.1.1)															
wd 2	ADDRESS WORD (SEE 40.5.1.2)															
wd 3	TERMINAL FAIL DDP WORD 1															
wd 4	TERMINAL FAIL DDP WORD 2															
wd 5	TERMINAL FAIL R/T WORD 3															
wd 6	TERMINAL FAIL R/T WORD 4															
wd 7	TACAN FAIL R/T (TACAN) WORD 5 (NAVY AIR AND F-15 ONLY)															
wd 8	TERMINAL FAIL IU WORD 6 (F-15 ONLY)															
wd 9	TACAN FAIL IU (TACAN) WORD 7 (NAVY AIR AND F-15 ONLY)															
wd 10	TERMINAL FAIL BATTERY WORD 8															
wd 11	TERMINAL FAIL RF LOOPBACK WORD 9															
wd 12	TERMINAL FAIL IU WORD 10															
wd 13	MESSAGE STATUS WORD															
wd 14	LRU BIT AND STATUS SUMMARY WORD															
wd 15	SRA SUMMARY WORD (NOT USED FOR F-15 AND NAVY AIR)															
wd 16	SDU ALERT WORD															
wd 17	DEGRADED PERFORMANCE WORD															
wd 18	IPF FAIL SUMMARY WORD R/T-HPA															
wd 19	START-UP/INTERRUPT WORD															
wd 20	NICP/SICP DEGRADED OPERATION WORD															
wd 21	TERMINAL FAIL HPAG WORD 11 (NAVY ONLY)															
wd 22	NOT USED															
wd 23	NOT USED															
wd 24	NOT USED															
wd 25	NOT USED															
wd 26	NOT USED															
wd 27	NOT USED															
wd 28	NOT USED															
wd 29	NOT USED															
wd 30	NOT USED															
wd 31	NOT USED															
wd 32	NOT USED															

NAVY ONLY - STATUS BLOCK 8

80.1.3.6.1 Terminal Fail DDP Word 1. (Block 8, Word 3)

	MSB								LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 3	M B T E S T F	I F L B F L	P T P M B	M B T E S T		G M A F	G M F	C H F	N W S R					R O M F	R A M F	C P U F

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = NICP CPU FAIL (CPUF)
1	LOGIC 1 = NICP RAM FAIL (RAMF)
2	LOGIC 1 = NICP ROM FAIL (ROMF)
3-6	SPARE
7	LOGIC 1 = NICP WRA STATUS REPORT NOT RECEIVED BY SICP (NWSR)
8	LOGIC 1 = CHRONOMETER FAIL (CHF)
9	LOGIC 1 = GLOBAL MEMORY TEST FAIL (GMF)
10	LOGIC 1 = GLOBAL MEMORY ADDRESS TEST FAIL (GMAF)
11	SPARE
12	LOGIC 1 = NICP/PTP MAILBOX TEST FAIL (MBTEST). DETERMINED BY THE PTP.
13	LOGIC 1 = NICP/PTP MAILBOX TEST FAIL (PTPMB). DETERMINED BY THE NICP.
14	LOGIC 1 = IF LOOPBACK FAIL (IFLBFL)
15	LOGIC 1 = SICP/NICP MAILBOX TEST FAILURE (MBTESTF). DETERMINED BY THE SICP.

NAVY ONLY - STATUS BLOCK 8

80.1.3.6.2 Terminal Fail DDP Word 2. (Block 8, Word 4)

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 4	D R T I F	C O R R F	P T P T E S T	B B C F	P L L F	D I G L B F L	C P S M F	P T P F L		S D D F	C T P F	X M I T F	O S C F	B I T B F	B I T R F	R T B F

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = REFERENCE TIME BASE FAIL (RTBF) - <u>NAVY SHIP ONLY</u>
1	LOGIC 1 = R SUPPLY FAIL (BITRF) - <u>NAVY SHIP ONLY</u>
2	LOGIC 1 = B SUPPLY FAIL (BITBF) - <u>NAVY SHIP ONLY</u>
3	LOGIC 1 = OSCILLATOR FAIL (OSCF) - <u>NAVY SHIP ONLY</u>
4	LOGIC 1 = XMIT TIMING AND CONTROL FAIL (XMITF) - <u>NAVY SHIP ONLY</u>
5	LOGIC 1 = CTP FAIL (CTPF) - <u>NAVY SHIP ONLY</u>
6	LOGIC 1 = SYNC DATA DET FAIL (SDDF) - <u>NAVY SHIP ONLY</u>
7	SPARE
8	LOGIC 1 = PTP FAIL (PTPFL) - <u>NAVY SHIP ONLY</u>
9	LOGIC 1 = CPSM FAIL (CPSMF) - <u>NAVY SHIP ONLY</u>
10	LOGIC 1 = DIGITAL LOOPBACK FAIL (DIGLBFL)
11	LOGIC 1 = RFG FAIL (PLLFL) - <u>NAVY SHIP ONLY</u>
12	LOGIC 1 = BASEBAND CONVERTER FAIL (BBCF) - <u>NAVY SHIP ONLY</u>
13	LOGIC 1 = PTP SELF TEST FAIL (PTPTEST)- <u>NAVY SHIP ONLY</u>
14	LOGIC 1 = CORRELATOR FAIL (CORRF) - <u>NAVY SHIP ONLY</u>
15	LOGIC 1= DDP-R/T INTERFACE FAIL (DRTIF)

NAVY ONLY - STATUS BLOCK 8

80.1.3.6.3 Terminal Fail R/T Word 3. (Block 8, Word 5)

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 5			R T S R A			C P S M D						R T T D M A F	T M W F		S Y N T H F	R C V R F

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = RECEIVER (ONE OR MULTIPLE) FAIL (RCVRF)
1	LOGIC 1 = SYNTHESIZER (ONE OR MULTIPLE) FAIL (SYNTHF)
2	SPARE
3	LOGIC 1 = TUNE MODE WRAPAROUND FAIL (TMWF)
4	LOGIC 1 = R/T TDMA FAIL (RTTDMAF)
5-9	SPARE
10	LOGIC 1 = CPSM NOT DETECTED BY HPA (CPSMD)
11	SPARE
12	SPARE
13	LOGIC 1 = R/T SRA FAIL (RTSRA)
14-15	SPARE

NAVY ONLY - STATUS BLOCK 8

80.1.3.6.4 Terminal Fail R/T Word 4. (Block 8, Word 6)

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 6	H I S S	H I S L			T R T T		P A O T F	T S D I P F	P O A N T A	P O A N T B		I F F F	O O B F F	1 0 3 0 M F	P W F	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	SPARE
1	LOGIC 1 = PULSE WIDTH FAIL (PWF)
2	LOGIC 1 = 1030/1090 MONITOR FAIL (1030MF)
3	LOGIC 1 = OUT-OF-BOUNDS FREQUENCY FAIL (OOBFF)
4	LOGIC 1 = IFF FREQUENCY COUNTER FAIL (IFFF)
5	SPARE
6	LOGIC 1 = Po ANT B > +1 dB or < -3 dB (POANTB)
7	LOGIC 1 = Po ANT A > +1 dB or < -3 dB (POANTA)
8	LOGIC 1 = TRANSMISSION SHUTDOWN DUE TO IPF FAIL (TSDIPF)
9	LOGIC 1 = PA OVER HIGH THRESHOLD TEMPERATURE (PAOTF)
10	SPARE
11	LOGIC 1 = TEST RTT LOOPBACK FAILURE (TRTT)
12-13	SPARE
14	LOGIC 1 = LONG TERM HISTOGRAM FAIL (HISL)
15	LOGIC 1 = SHORT TERM HISTOGRAM FAIL (HISS)

NAVY ONLY - STATUS BLOCK 8

80.1.3.6.5 TACAN Fail R/T (TACAN) Word 5. (Block 8, Word 7)

<u>NAVY AIR ONLY</u>										LSB						
MSB	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 7	P W R U P F	A G C F	R E C S E N S F	P W R A M P F	S Y N T H F	R A M F	R O M F	C P U F	N O A C K					R T C F	F A I L I N D	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	SPARE
1	R/T TACAN FAILURE INDICATOR (FAIL IND) - <u>NAVY AIR ONLY</u> - SET WHEN ANY BIT FROM 8 THROUGH 15 IS SET TO THE FAIL STATE.
2	R/T TACAN COMM FAIL (RTCF) - <u>NAVY AIR ONLY</u>
3-6	SPARE
7	LOGIC 1 = NO R/T ACKNOWLEDGEMENT (NO ACK) - <u>NAVY AIR ONLY</u>
8	LOGIC 1 = CPU FAILURE (CPUF) - <u>NAVY AIR ONLY</u>
9	LOGIC 1 = ROM FAILURE (ROMF) - <u>NAVY AIR ONLY</u>
10	LOGIC 1 = RAM FAILURE (RAMF) - <u>NAVY AIR ONLY</u>
11	LOGIC 1 = SYNTHESIZER FAILURE LOSS OF LOCK (SYNTHF) <u>NAVY AIR ONLY</u>
12	LOGIC 1 = POWER LEVEL (ENHANCED TACAN) FAILURE (PWR AMP F) - <u>NAVY AIR ONLY</u>
13	LOGIC 1 = RECEIVER SENSITIVITY FAILURE (REC SENSF) - <u>NAVY AIR ONLY</u>
14	LOGIC 1 = AGC FUNCTION FAILURE (AGCF) - <u>NAVY AIR ONLY</u>
15	LOGIC 1 = POWER-UP SELF TEST FAILURE (PWR UP F) - <u>NAVY AIR ONLY</u>

NAVY ONLY - STATUS BLOCK 8

80.1.3.6.6 Terminal Fail IU Word 6. (Block 8, Word 8)

	MSB														LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 8			S I C P S T	C T P W F	P T P W F				S R A F M	T T D M A F	M U X T W F	M U X F	M I C B F / M U X F		T I O F	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	SPARE
1	LOGIC 1 = TAILORED I/O FAIL (TIOF) - <u>NAVY SHIP ONLY</u>
2	NOT USED
3	LOGIC 1 = MIC BIAS FAIL (MICBF) - <u>NAVY AIR ONLY</u> LOGIC 1 = MUX FAIL (MUXF) - <u>NAVY SHIP ONLY</u>
4	LOGIC 1 = MUX FAIL (MUXF) - <u>NAVY AIR ONLY</u>
5	LOGIC 1 = MUX GM TEST FAIL (MUXTWF)
6	LOGIC 1 = TAILORED TDMA FAIL (TTDMAF)
7	LOGIC 1 = SRA INITIATE IN FALSE MODE (SRAFM) - <u>NAVY SHIP ONLY</u>
8-10	SPARE
11	LOGIC 1 = PTP BIT INIT WRAPAROUND FAIL (PTPWF) - <u>NAVY SHIP ONLY</u>
12	LOGIC 1 = CTP BIT INIT WRAPAROUND FAIL (CTPWF) - <u>NAVY SHIP ONLY</u>
13	LOGIC 1 = SICP SELF TEST FAIL (SICPST)
14-15	SPARE

NAVY ONLY - STATUS BLOCK 8

80.1.3.6.7 TACAN Fail IU (TACAN) Word 7. (Block 8, Word 9)

<u>NAVY AIR ONLY</u>																
MSB								LSB								
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 9							T A C F									T P S F

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = TACAN POWER SUPPLY FAIL (TPSF) - <u>NAVY AIR ONLY</u>
1-8	SPARE
9	LOGIC 1 = TACAN IU FAIL (TACF) - <u>NAVY AIR ONLY</u>
10-15	SPARE

NAVY ONLY - STATUS BLOCK 8

80.1.3.6.8 Terminal Fail RF Loopback Word 9. (Block 8, Word 11)

BIT DESIGNATION

13 LOGIC 1 = RTT INT 2A MESSAGE TYPE FAILURE (LBE)

NOTE: THE NICP DETERMINES BITS 0-13 DURING MANUAL BIT AND REPORTS THEM TO THE SICP VIA THE NICP 12-SECOND STATUS REPORT FOR INPUT INTO THIS WORD.

14-15 CURRENT LOOPBACK STATUS (CLBST)

BIT 15 • 14
 • • • • •
 0 • 0 TRANSMITTED: NO ERRORS
 0 • 1 HEADER, BLOCK DECODE OR OUTER
 • PARITY FAIL
 1 • 0 TOA COMPARISON FAIL
 1 • 1 NO LOOPBACK RECEIVED

NOTE: BITS 14 AND 15 REPORT THE RESULTS OF THE LATEST LOOPBACK RECEIVED, PRIOR TO THE END OF THE LAST OPERATIONAL BIT CYCLE. FOR NAVY AIR ONLY, IF THE NUMBER OF LOOPBACK FAILURES EXCEEDS THE NUMBER OF MTIs (MOMENTARY TRANSMIT INHIBIT) RECEIVED DURING THE BIT CYCLE, A "00" WILL BE REPORTED FOR THIS FIELD.

NAVY ONLY - STATUS BLOCK 8

80.1.3.6.9 Message Status Word. (Block 8, Word 13)

MSB											LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 13					T M F				M N A		N R T T R	N M E S S	M E R			

The bit designation shall be as follows:

FOR EACH VARIABLE BELOW,

LOGIC 1 = THE NICP REPORTED THE SPECIFIED CONDITION IN ITS LAST 12-SECOND STATUS REPORT.

LOGIC 0 = THE NICP DID NOT REPORT THE SPECIFIED CONDITION IN ITS LAST 12-SECOND STATUS REPORT.

BIT DESIGNATION

0-2 SPARE

3 EXCESSIVE^H UNCORRECTABLE MESSAGE ERROR RATE (MER)

4 NO MESSAGES SUCCESSFULLY RECEIVED (NMESS)

5 POOR^I RESPONSE TO RTT INTERROGATIONS (NRTTR)

6 SPARE

7 ONE OR MORE MESSAGES NOT ACKNOWLEDGED (MNA)

8 SPARE

9 SPARE

10 SPARE

11 ONE OR MORE TEST MESSAGE FAILS (TMF)

12-15 SPARE

^H EXCESSIVE = [(NUMBER OF TRANSMISSIONS RECEIVED IN ERROR) DIVIDED BY (NUMBER OF SUCCESSFUL TRANSMISSIONS) > 0.20 AND NUMBER OF SUCCESSFUL TRANSMISSIONS > 0,] OR [NUMBER OF TRANSMISSIONS RECEIVED IN ERROR > 0 AND NUMBER OF SUCCESSFUL TRANSMISSIONS = 0.]

^I POOR = (NUMBER OF RTT REPLIES RECEIVED) DIVIDED BY (NUMBER OF RTT INTERROGATIONS TRANSMITTED) < 0.80 AND NUMBER OF RTT INTERROGATIONS TRANSMITTED > 0.

NAVY ONLY - STATUS BLOCK 8

80.1.3.6.10 WRA BIT and Status Summary Word. (Block 8, Word 14)

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 14					H P A F	B S T I F	D E G P R	M F	I P F F	S D U A L	R T F	I U F	D D P F	T A C F	T D M A F	T E R M F

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = TERMINAL FAIL (TERMF)
1	LOGIC 1 = TDMA FAIL (TDMAF)
2	LOGIC 1 = TACAN IU FAIL (TACF) - <u>NAVY AIR ONLY</u>
3	LOGIC 1 = DDP FAIL (DDPF)
4	LOGIC 1 = IU FAIL (IUF)
5	LOGIC 1 = R/T FAIL (RTF)
6	LOGIC 1 = SDU ALERT (SDUAL)
7	LOGIC 1 = IPF FAIL (IPFF)
8	LOGIC 1 = MESSAGE FAIL (MF)

NOTE: MESSAGE FAIL BIT IS SET WHEN ANY BIT IN THE MESSAGE STATUS WORD (WORD 13) IS SET.

9	LOGIC 1 = DEGRADED PERFORMANCE (DEGPR)
10	LOGIC 1 = NICAD BATTERY FAIL (BSTIF)
11	LOGIC 1 = HPAG FAIL (HPAF)
12-15	SPARE

NAVY ONLY - STATUS BLOCK 8

80.1.3.6.11 SRA Summary Word. (Block 8, Word 15)

NAVY SHIP ONLY																
MSB								LSB								
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 15		UNIT			SRATMPF				SRASMPF				SRAMPF			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-3	SRA MOST PROBABLE FAILURE INDICATOR (SRAMPF) - <u>NAVY SHIP ONLY</u>
BIT	3 • 2 • 1 • 0
	• • • • •
	0 • 0 • 0 • 0 NO FAILURE
	0 • 0 • 0 • 1 CARD A1 FAILED
	. • . • . • .
	. • . • . • .
	1 • 1 • 1 • 1 CARD A15 FAILED
4-7	SRA SECOND MOST PROBABLE FAILURE INDICATOR (SRASMPF) - <u>NAVY SHIP ONLY</u>
BIT	7 • 6 • 5 • 4
	• • • • •
	0 • 0 • 0 • 0 NO FAILURE
	0 • 0 • 0 • 1 CARD A1 FAILED
	. • . • . • .
	. • . • . • .
	1 • 1 • 1 • 1 CARD A15 FAILED
8-11	SRA THIRD MOST PROBABLE FAILURE INDICATOR (SRATMPF) - <u>NAVY SHIP ONLY</u>
BIT	11 • 10 • 9 • 8
	• • • • •
	0 • 0 • 0 • 0 NO FAILURE
	0 • 0 • 0 • 1 CARD A1 FAILED
	. • . • . • .
	. • . • . • .
	1 • 1 • 1 • 1 CARD A15 FAILED

BIT DESIGNATION

12-14 UNIT - INDICATES THE WRA IN WHICH THE FAILED CARDS ARE
LOCATED - NAVY SHIP ONLY

BIT	14	•	13	•	12	
	•	•	•	•	•	•
	0	•	0	•	0	NO FAILURE
	0	•	0	•	1	R/T
	0	•	1	•	0	DDP
	0	•	1	•	1	IU
	1	•	0	•	0	SDU
	1	•	0	•	1	BATTERY
	1	•	1	•	0	NOT USED BY NAVY
	1	•	1	•	1	HPA

15 RESERVED FOR INTERNAL NICP/SICP USE

NOTE: THE FOLLOWING ARE THE IDENTITIES OF THE VARIOUS SRAs.

DDP SRAs

A1	PLAIN TEXT PROCESSOR
A2	CENTRAL PROCESSING UNIT
A3	LOCAL MEMORY
A4	GLOBAL MEMORY/SYNC DATA DETECTOR/CHRONOMETER
A5	CORRELATOR/BASEBAND CONVERTER
A6	CYPHER TEXT PROCESSOR/REED-SOLOMON ERROR DETECTION AND CORRECTION/TRANSMIT TIMING AND CONTROL
A7	POWER SUPPLY #1
A8	REFERENCE TIME BASE/REFERENCE FREQUENCY GENERATOR
A9	POWER SUPPLY #2/CONTINUOUS PHASE SHIFT MODULATOR
A10	REFERENCE OSCILLATOR
A11	CHASSIS
A12	NOT USED
THRU	
A15	NOT USED

IU SRAs

A1	TAILORED I/O - SRA BIT
A2	VOICE/MUX
A3	CENTRAL PROCESSING UNIT
A4	LOCAL MEMORY/SUPPORT
A5	CHASSIS
A6	NOT USED
THRU	
A15	NOT USED

	<u>HPA SRAs</u>
A1	TOP POWER AMPLIFIER
A2	BOTTOM POWER AMPLIFIER
A3	POWER SUPPLY/PRE-DRIVER
A4	PROCESSOR
A5	INPUT/OUTPUT
A6	WAVEFORM GENERATOR
A7	CHASSIS
A8	NOT USED
THRU	
A15	NOT USED

	<u>R/T SRAs</u>
A1	POWER AMPLIFIER
A2	POWER SUPPLY
A3	DIGITAL DATA PROCESSOR INTERFACE
A4	TACAN (<u>NAVY AIR ONLY</u>)
A5	RECEIVER/SYNTHESIZER CHANNEL 1
A6	RECEIVER/SYNTHESIZER CHANNEL 2
A7	RECEIVER/SYNTHESIZER CHANNEL 3
A8	RECEIVER/SYNTHESIZER CHANNEL 4
A9	RECEIVER/SYNTHESIZER CHANNEL 6
A10	RECEIVER/SYNTHESIZER CHANNEL 5
A11	RECEIVER/SYNTHESIZER CHANNEL 8
A12	RECEIVER/SYNTHESIZER CHANNEL 7
A13	R/T ANTENNA INTERFACE UNIT
A14	LOWER LOOP
A15	CHASSIS

80.1.3.6.12 SDU Alert Word. (Block 8, Word 16)

	MSB										LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 16		V A R 7	V A R 6	V A R 5	V A R 4	V A R 3	V A R 2	V A R 1	V A R 0	A L A R M						

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-5	SPARE
6	LOGIC 1 = SDU ALARM
7	LOGIC 1 = SDU VAR 0 BAD
8	LOGIC 1 = SDU VAR 1 BAD
9	LOGIC 1 = SDU VAR 2 BAD
10	LOGIC 1 = SDU VAR 3 BAD
11	LOGIC 1 = SDU VAR 4 BAD
12	LOGIC 1 = SDU VAR 5 BAD
13	LOGIC 1 = SDU VAR 6 BAD
14	LOGIC 1 = SDU VAR 7 BAD
15	SPARE

NOTE: BIT 6 IS TAKEN FROM GLOBAL MEMORY (LOCATION 0063, SEE 10.1.1.2.1.1); BITS 7-14 ARE TAKEN FROM WORD 17 OF THE NICP 12-SECOND STATUS REPORT. THEY ARE LOGIC 1 IF THE SDU REPORTED A PARITY ERROR IN THE CORRESPONDING VARIABLE AT LEAST ONCE IN THE 12-SECOND PERIOD. (SEE 80.1.3.2.5)

NAVY ONLY - STATUS BLOCK 8

80.1.3.6.13 Degraded Performance Word. (Block 8, Word 17)

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 17										P O A N T A		P O A N T B	L P A O T F	V S W R B F	V S W R A F	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	SPARE
1	LOGIC 1 = VSWR ANT A FAIL (VSWRAF)
2	LOGIC 1 = VSWR ANT B FAIL (VSWRBF)
3	LOGIC 1 = PA OVER LOW THRESHOLD TEMPERATURE (LPAOTF)
4	POWER OUTPUT ANT B PERFORMANCE (POANTB) LOGIC 0 = PERFORMANCE NOT DEGRADED LOGIC 1 = 1 dB < POWER OUTPUT < 3 dB DOWN
5	SPARE
6	POWER OUTPUT ANT A PERFORMANCE (POANTA) LOGIC 0 = PERFORMANCE NOT DEGRADED LOGIC 1 = 1 dB < POWER OUTPUT < 3 dB DOWN
7-15	SPARE

NOTE: IF HPA PRESENT BIT (SEE INITIALIZATION BLOCK 1, WORD 3, BIT 7), IS SET TO "HPA PRESENT", THEN THIS WORD INDICATES HPA DEGRADED PERFORMANCE. IF HPA PRESENT BIT IS NOT SET, THEN IT INDICATES R/T DEGRADED PERFORMANCE.

NAVY ONLY - STATUS BLOCK 8

80.1.3.6 SACP Filter Request. (Block 15) Used for test purposes only.

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CONTROL WORD (SEE 40.5.1.1)															
wd 2	ADDRESS WORD (SEE 40.5.1.2)															
wd 3	SACP MESSAGE FILTER WORD 1															
wd 4	SACP MESSAGE FILTER WORD 2															
wd 5	SACP MESSAGE FILTER WORD 3															
wd 6	SACP MESSAGE FILTER WORD 4															
wd 7	SACP MESSAGE FILTER WORD 5															
wd 8	SACP MESSAGE FILTER WORD 6															
wd 9	SACP MESSAGE FILTER WORD 7															
wd 10	SACP MESSAGE FILTER WORD 8															
wd 11	SACP MESSAGE FILTER WORD 9															
wd 12	SACP MESSAGE FILTER WORD 10															
wd 13	SACP MESSAGE FILTER WORD 11															
wd 14	SACP MESSAGE FILTER WORD 12															
wd 15	SACP MESSAGE FILTER WORD 13															
wd 16	SACP MESSAGE FILTER WORD 14															
wd 17	SACP MESSAGE FILTER WORD 15															
wd 18	SACP MESSAGE FILTER WORD 16															
wd 19	SACP PPLI LOOPBACK MSG FILTER WORD															
wd 20	NOT USED BY NAVY															
wd 21	NOT USED BY NAVY															
wd 22	NOT USED BY NAVY															
wd 23	NOT USED BY NAVY															
wd 24	NOT USED BY NAVY															
wd 25	NOT USED BY NAVY															
wd 26	NOT USED BY NAVY															
wd 27	NOT USED BY NAVY															
wd 28	SACP PPLI MESSAGE FILTER STN WORD															
wd 29	NOT USED BY NAVY															
wd 30	NOT USED BY NAVY															
wd 31	NOT USED BY NAVY															
wd 32	NOT USED															

NAVY ONLY - STATUS BLOCK 15

80.1.3.7.1 SACP Message Filter Words. (16 words) (Block 15, Words 3 through 18).

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	J1.7	J1.6	J1.5	J1.4	J1.3	J1.2	J1.1	J1.0	J0.7	J0.6	J0.5	J0.4	J0.3	J0.2	J0.1	J0.0
wd 2	J3.7	J3.6	J3.5	J3.4	J3.3	J3.2	J3.1	J3.0	J2.7	J2.6	J2.5	J2.4	J2.3	J2.2	J2.1	J2.0
wd 3	J5.7	J5.6	J5.5	J5.4	J5.3	J5.2	J5.1	J5.0	J4.7	J4.6	J4.5	J4.4	J4.3	J4.2	J4.1	J4.0
wd 4	J7.7	J7.6	J7.5	J7.4	J7.3	J7.2	J7.1	J7.0	J6.7	J6.6	J6.5	J6.4	J6.3	J6.2	J6.1	J6.0
wd 5	J9.7	J9.6	J9.5	J9.4	J9.3	J9.2	J9.1	J9.0	J8.7	J8.6	J8.5	J8.4	J8.3	J8.2	J8.1	J8.0
wd 6	J11.7	J11.6	J11.5	J11.4	J11.3	J11.2	J11.1	J11.0	J10.7	J10.6	J10.5	J10.4	J10.3	J10.2	J10.1	J10.0
wd 7	J13.7	J13.6	J13.5	J13.4	J13.3	J13.2	J13.1	J13.0	J12.7	J12.6	J12.5	J12.4	J12.3	J12.2	J12.1	J12.0
wd 8	J15.7	J15.6	J15.5	J15.4	J15.3	J15.2	J15.1	J15.0	J14.7	J14.6	J14.5	J14.4	J14.3	J14.2	J14.1	J14.0
wd 9	J17.7	J17.6	J17.5	J17.4	J17.3	J17.2	J17.1	J17.0	J16.7	J16.6	J16.5	J16.4	J16.3	J16.2	J16.1	J16.0
wd 10	J19.7	J19.6	J19.5	J19.4	J19.3	J19.2	J19.1	J19.0	J18.7	J18.6	J18.5	J18.4	J18.3	J18.2	J18.1	J18.0
wd 11	J21.7	J21.6	J21.5	J21.4	J21.3	J21.2	J21.1	J21.0	J20.7	J20.6	J20.5	J20.4	J20.3	J20.2	J20.1	J20.0
wd 12	J23.7	J23.6	J23.5	J23.4	J23.3	J23.2	J23.1	J23.0	J22.7	J22.6	J22.5	J22.4	J22.3	J22.2	J22.1	J22.0
wd 13	J25.7	J25.6	J25.5	J25.4	J25.3	J25.2	J25.1	J25.0	J24.7	J24.6	J24.5	J24.4	J24.3	J24.2	J24.1	J24.0
wd 14	J27.7	J27.6	J27.5	J27.4	J27.3	J27.2	J27.1	J27.0	J26.7	J26.6	J26.5	J26.4	J26.3	J26.2	J26.1	J26.0
wd 15	J29.7	J29.6	J29.5	J29.4	J29.3	J29.2	J29.1	J29.0	J28.7	J28.6	J28.5	J28.4	J28.3	J28.2	J28.1	J28.0
wd 16	J31.7	J31.6	J31.5	J31.4	J31.3	J31.2	J31.1	J31.0	J30.7	J30.6	J30.5	J30.4	J30.3	J30.2	J30.1	J30.0

LOGIC 0 = PROVIDE MESSAGE
LOGIC 1 = DO NOT PROVIDE MESSAGE

NAVY ONLY - STATUS BLOCK 15

80.1.3.7.2 Status Block 15, Words 20-27. Not used by NAVY.

NAVY ONLY - STATUS BLOCK 15

80.1.3.7.3 Deleted. (Block 15, Word 28)

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 28	S S M	PPLI MESSAGE FILTER STN														

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-14	SACP MESSAGE FILTER SOURCE TRACK NUMBER CONSISTING OF FIVE OCTAL DIGITS (00000 TO 77777). IF THE STN EQUALS ZERO, THE PPLI FILTER CRITERIA APPLIES TO ALL STNS. IF THE STN DOES NOT EQUAL ZERO, THE PPLI FILTER CRITERIA APPLIES TO THE SPECIFIED STN
15	SCREEN FOR SACP MESSAGES (SSM) LOGIC 1 = PROVIDE MESSAGES TO SACP AS INDICATED BY SACP MESSAGE FILTERS LOGIC 0 = DO NOT PROVIDE MESSAGES TO SACP

80.1.3.7.4 Status Block 15, Words 29-31. Not used by Navy.

NAVY ONLY - STATUS BLOCK 15

80.1.3.8 NICP Status Report Number 2. (Block 16)

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CONTROL WORD (SEE 40.5.1.1)															
wd 2	ADDRESS WORD (SEE 40.5.1.2)															
wd 3	REL NAV KALMAN FILTER STATUS WORD 2															
wd 4	RESERVED FOR INTERNAL SICP/NICP USE															
wd 5	RESERVED FOR INTERNAL SICP/NICP USE															
wd 6	RESERVED FOR INTERNAL SICP/NICP USE															
wd 7	RESERVED FOR INTERNAL SICP/NICP USE															
wd 8	RESERVED FOR INTERNAL SICP/NICP USE															
wd 9	RESERVED FOR INTERNAL SICP/NICP USE															
wd 10	RESERVED FOR INTERNAL SICP/NICP USE															
wd 11	RESERVED FOR INTERNAL SICP/NICP USE															
wd 12	NOT USED															
wd 13	NOT USED															
wd 14	NOT USED															
wd 15	NOT USED															
wd 16	NOT USED															
wd 17	NOT USED															
wd 18	NOT USED															
wd 19	NOT USED															
wd 20	NOT USED															
wd 21	NOT USED															
wd 22	NOT USED															
wd 23	NOT USED															
wd 24	NOT USED															
wd 25	NOT USED															
wd 26	NOT USED															
wd 27	NOT USED															
wd 28	NOT USED															
wd 29	NOT USED															
wd 30	NOT USED															
wd 31	NOT USED															
wd 32	NOT USED															

NAVY ONLY - STAUTS BLOCK 16

80.1.3.8.1 Block 16, Words 4-11. Reserved for internal NICP/SICP use.

80.1.3.9 Status Block 17. Not used by NAVY.

80.1.3.10 Status Block 20. Not used by NAVY.

NAVY ONLY - STATUS BLOCK 16, 17, 20

80.1.3.11 TSR Status Report Number 2. (Block 31)

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	CONTROL WORD (SEE 40.5.1.1)															
wd 2	ADDRESS WORD (SEE 40.5.1.2)															
wd 3	TSR POOL 0, STATUS WORD 4															
wd 4	TSR POOL 1, STATUS WORD 4															
wd 5	TSR POOL 2, STATUS WORD 4															
wd 6	TSR POOL 3, STATUS WORD 4															
wd 7	TSR POOL 4, STATUS WORD 4															
wd 8	TSR POOL 5, STATUS WORD 4															
wd 9	TSR POOL 6, STATUS WORD 4															
wd 10	TSR POOL 7, STATUS WORD 4															
wd 11	NOT USED															
wd 12	NOT USED															
wd 13	NOT USED															
wd 14	NOT USED															
wd 15	NOT USED															
wd 16	NOT USED															
wd 17	NOT USED															
wd 18	NOT USED															
wd 19	NOT USED															
wd 20	NOT USED															
wd 21	NOT USED															
wd 22	NOT USED															
wd 23	NOT USED															
wd 24	NOT USED															
wd 25	NOT USED															
wd 26	NOT USED															
wd 27	NOT USED															
wd 28	NOT USED															
wd 29	NOT USED															
wd 30	NOT USED															
wd 31	NOT USED															
wd 32	NOT USED															

NAVY ONLY - STATUS BLOCK 31

80.1.3.11.1 TSR Pool Status Word 4. (Block 31, words 3-10). - NAVY SHIPBOARD AND NAVY AIRBORNE ONLY - These words specify TSR Status Word 4 for TSR pools 0-7. TSR Status Words 1-3 are in Status Block 30 (see 40.775.25).

MSB												LSB				
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
STATUS WORD 4			NUMBER OF BASIC BLOCKS										BBRR			

The bit designation shall be as follows:

Status Word 4

<u>BIT</u>	<u>DESIGNATION</u>
0-3	BASIC BLOCK RECURRENCE RATE (BBRR) 0 = POOL IS SUSPENDED 1-3 = NOT USED 4-15 = SPECIFIED RECURRENCE RATE
4-13	NUMBER OF BASIC BLOCKS IN THE POOL 0 = POOL IS SUSPENDED 1, 513-1023 = NOT USED 2-512 = SPECIFIED NUMBER OF BASIC BLOCKS
14-15	SPARE

80.1.4 Host/IU Mux 1553 Interface

80.1.4.1 Scope. This section of the appendix describes the communication requirements between the IU and the Host, organizes the information flow into messages, and defines the data words within each message.

80.1.4.2 General Requirements. The data transfers between the Host and the IU shall be accomplished via a MIL-STD-1553 Multiplex (MUX) Bus. For this purpose, data is defined to be any digital data stored in any variable memory location in either equipment.

80.1.4.3 Bus Control and Information Transfer modes. The Host will be bus controller and will issue command words to control the transfer of data between the IU and the Host. The IU shall satisfy the requirements of a Remote Terminal (RT) as specified in MIL-STD-1553. Four types of information transfer modes will be implemented: (1) bus controller to IU data transfers, (2) IU to bus controller data transfers, (3) RT to IU data transfers and (4) Broadcast Controller to IU.

80.1.4.4 Message Transfer Characteristics. Messages, as defined in MIL-STD-1553, consist of command words, data words and status words. Data encoding and formatting will be consistent with the requirements of MIL-STD-1553 and this appendix.

A message transfer will be completed when the command, data and status words have been exchanged in the sequence defined in MIL-STD-1553.

80.1.4.4.1 Command Words. The command words will be structured as shown in MIL-STD-1553. The 5-bit address field ranges from 0 to 31. The JTIDS IU address is set to a single value between 0 and 30; Address 31 is used for broadcast commands. The 5-bit subaddress field portion of the command word is used to designate the type of data transferred (see Tables VIII-I and VIII-II). The word count field specifies the number of words to be received by the IU, excluding the command word, when the transmit/receive bit is a "0" and the number of words to be transmitted by the IU when the transmit/receive (T/R) bit is a "1". Command words will be issued only by the bus controller, never by the IU. The format of the command word is given in 80.1.4.8.1.1.1 and 80.1.4.8.2.1.1.

80.1.4.4.1.1 Mode Commands. If the subaddress field of the command word is either all zeroes or all ones, the word count field of the command word will be interpreted as a mode code. The IU will implement the following mode commands:

Function	Mode Code	T/R Bit ...	Associated Data Word	Broadcast Command Allowed
Synchronize	00001	1	No	Yes
Transmit Status Word	00010	1	No	No
Transmitter Shutdown	00100	1	No	Yes
Override Transmitter Shutdown	00101	1	No	Yes
Reset Remote Terminal	01000	1	No	Yes
Transmit Last Command	10010	1	Yes	No

80.1.4.4.1.1.1 Synchronize. This commands the IU to transmit its current status word. No further processing is required.

80.1.4.4.1.1.2 Transmit Status Word. This command shall cause the IU to transmit the status word associated with the last valid command word it received that was not a transmit status word mode command.

80.1.4.4.1.1.3 Transmitter Shutdown. This command shall cause the IU to disable the transmitter associated with the redundant bus. The IU will not shut down a transmitter on the bus from which this command is received. The IU will respond with a Status Word after this command.

80.1.4.4.1.1.4 Override Transmitter Shutdown. This command shall cause the IU to enable a transmitter which was previously disabled. The IU will not enable a transmitter on the bus from which this command was received. The IU will respond with a Status Word after this command.

80.1.4.4.1.1.5 Reset Remote Terminal. This command shall reset the IU's 1553 MUX Interface to a power up initialized state. The IU will first transmit its status word, and then reset. This command will not reset the entire JTIDS Terminal.

80.1.4.4.1.1.6 Transmit Last Command. This commands the IU to transmit its status word followed by a single data word which contains bit times 4 through 19 of the last command word, excluding a Transmit Last Command word mode code received by the IU. This mode command will not alter the status word from the IU.

80.1.4.4.2 Status Words. Status words are issued by the IU. The format of the Status Word is given in 80.1.4.8.1.1.3 and 80.1.4.8.2.1.3. The status word will have the bit assignments of MIL-STD-1553. The implemented status bits will be:

TABLE VIII-I. HOST TO IU (TERMINAL INPUT MESSAGE)
SUBADDRESS DEFINITION

SUBADDRESS (BASE 10)	DATA
1	INITIALIZATION DATA
2 - 11	COMMON CARRIER MESSAGES
12	NOT USED BY NAVY
13 - 14	TARGET SORTING MESSAGES (NOT USED BY NAVY SHIP)
15	AIR PLATFORM AND SYSTEM STATUS MESSAGE (NOT USED BY NAVY SHIP)
16	REQUESTS FOR DATA, CONTROL INPUTS, R/C RESPONSES - IN ADDITION - <u>NAVY AIR ONLY</u> - ADVANCED SLOT NOTIFICATION / COMPOSITE BLANKING SPECIFIC SLOTS AND CONTROLS, NET SELECTION INPUTS
17	HOST NAVIGATION DATA
18	EXTERNAL TIME REFERENCE DATA
19 - 28	NOT USED BY NAVY
29	MUX CONTROL
30	CLOCK SYNCHRONIZATION DATA (NOT USED BY NAVY SHIP)

NOTE: SUBADDRESSES 0 AND 31 ARE RESERVED FOR MODE COMMANDS
(SEE 80.1.4.4.1.1).

TABLE VIII-II. IU TO HOST (TERMINAL OUTPUT MESSAGE)
SUBADDRESS DEFINITION

SUBADDRESS (BASE 10)	DATA
1	TAPE RECORDING WORD COUNT, RECEIVED MESSAGE WORD COUNT, CONTROL SETTINGS, OPERATIONAL AND INITIALIZATION STATUS, TIME OF DAY, LOOPBACK STATUS #1, NUMBER OF NPG BUFFERS AVAILABLE, RELAY INHIBIT STATUS, TIME QUALITY, TSR STATUS, AND TSR DATA MESSAGE BUFFER STATUS. IN ADDITION - <u>NAVY AIR ONLY</u> - NUMBER OF TARGET SORTING BUFFERS AVAILABLE, ADVANCED SLOT NOTIFICATION STATUS, COMPOSITE BLANKING STATUS, AND HOST NPG FILTER STATUS
2 - 20	RECEIVED MESSAGE DATA
21 - 27	TAPE RECORDING DATA
28	HOST-REQUESTED DATA
29	LOOPBACK STATUS #2 IN ADDITION - <u>NAVY AIR ONLY</u> - TACAN DATA, NET SELECTION STATUS
30	TERMINAL NAVIGATION DATA

NOTE: SUBADDRESSES 0 AND 31 ARE RESERVED FOR MODE COMMANDS (SEE 80.1.4.4.1.1).

- a. Message Error
- b. Subsystem Flag
- c. Terminal Flag
- d. Busy
- e. Broadcast Command Received

The Busy bit will be set according to IU Transmit Mode Operation rules defined in 80.1.4.4.6. In addition, the Busy bit will be high at all times when invalid data may be present on the bus (e.g., during operator initiated BIT). When the Busy bit is set, the terminal will provide no data to the Host (except the Status Word).

The Subsystem Flag bit will be set if the MUX card within the IU cannot gain proper access to Global Memory. The Terminal Flag bit will be set if the MUX card itself has detected a failure in its hardware.

80.1.4.4.2.1 Message Failures. Message Failure Terminal responses shall be the following:

- a. If the IU receives invalid or improperly timed data syncs, the IU shall set the message error bit to "1", continue with message processing but suppress the Status Word. The IU shall also specify in the Status/Validity Word of Global Memory (See 80.1.1.3.1.1.2 and 90.1.1.3.1.1.2) that the SICP is not to process the message.
- b. If the IU receives the incorrect number of data words (as compared with the Word Count field of the Command Word) the message error bit shall be set to "1" and the Status Word shall be suppressed. The IU shall also specify in the Status/Validity Word of Global Memory (See 80.1.1.3.1.1.2 and 90.1.1.3.1.1.2) that the SICP is not to process the message.
- c. If the IU receives a valid data sync but fails any one or more of word validation tests, the IU shall continue reception of the entire message and set the message error bit and suppress the Status Word. The IU shall also specify in the Status/Validity Word of Global Memory (See 20.1.1.3.1.1.2 and 30.1.1.3.1.1.2) that the SICP is not to process the message.
- d. If the IU receives a valid command word, including sync and IU address, but an illegal or non-implemented mode code is received, the IU shall inhibit access to Global Memory, and the message error bit in the status word shall be set to a "1".

- e. If the IU validates the command word sync and IU address field, but the remaining bits of the Command word fail the valid word test (proper number of bits, valid Manchester code, odd parity check) the IU shall not respond and the IU status word shall not be transmitted to the controller.

80.1.4.4.3 Redundancy. The IU will interface with two data buses. Both buses will be monitored for receipt of valid command words. When a valid command word is received on one bus, that bus will be considered the active bus for data block transfer until a valid command word is received on the other bus.

80.1.4.4.4 Data Words. This appendix defines the format of the data words used to implement the Host/IU interface. Data for words and/or bits referred to as "spare", "don't care", "not used by Navy Ship", "not used by Navy Air" or "not used by Navy" will be set to 0.

80.1.4.4.5 IU Receive Mode Operation. Upon receipt of a valid receive command word from the MUX bus controller, the IU will read the receive buffer starting address at a location in Global Memory. The five LSBs of the location in which the starting address resides will correspond to the value of the five subaddress bits received in the MUX bus command word. The IU will utilize the starting address read from this location to store the received MUX data block. If the IU receives a valid command on one bus while operating on a data block being received on the other bus, the IU will cease the current data block transfer and shall respond to the latest bus command word. The IU will respond to a controller command within 4 to 12 microseconds. The minimum time that the controller shall wait before considering that a response has not occurred is 14.0 microseconds. Intermessage gap time shall be 4 microseconds (minimum).

80.1.4.4.6 IU Transmit Mode Operation. The MUX bus controller will periodically command the IU to transmit data. When the bus controller determines that it has read all IU output data of interest, it will write a single data word to TIM 29. If this write to TIM 29 occurs at least 20 milliseconds after the previous MUX Data Transfer Complete Interrupt (MDTCI), the IU shall set the Transmit Command Busy Bit within 50 microseconds; if the write to TIM 29 is earlier than 20 milliseconds after the previous MDTCI, the IU shall wait until the full 20 milliseconds have passed before setting the Transmit Command Busy Bit and starting to refresh the TOM buffers. The Transmit Command Busy Bit is the Busy Bit sent in Status Word responses to Transmit Commands.

Setting of the Transmit Command Busy Bit will not affect the value of the Busy Bit in Status Word responses to Receive Commands. The IU shall, therefore, be capable of accepting and responding "not busy" to valid MUX bus Receive Commands during transmit buffer refresh.

The IU shall use a maximum of 10 ms to complete the TOM buffer refresh cycle and reset the Transmit Command Busy Bit.

80.1.4.5 MUX Cycle. A MUX cycle will consist of an interval in which the IU is updating the TOM buffers (the transmit buffer refresh cycle) followed by an interval in which the IU is transmitting to the Host. The lengths of these intervals are determined by the Bus Controller and IU as described in 80.1.4.9. The minimum length of a MUX cycle is 20 ms. A graphical description is given in Figure VIII-II.

80.1.4.5.1 Terminal Input Message (TIM) Rates. The host will restrict its transfer of TIMs (see Table VIII-I for TIM definitions) so that no given subaddress is updated any sooner than 20 ms from its previous update. Additionally, the Host will restrict transfer of common carrier messages (via TIMs 2-11) to a nominal rate of ten common carrier messages per 50 ms. The Host can send TIMs to the IU at any time in the MUX cycle.

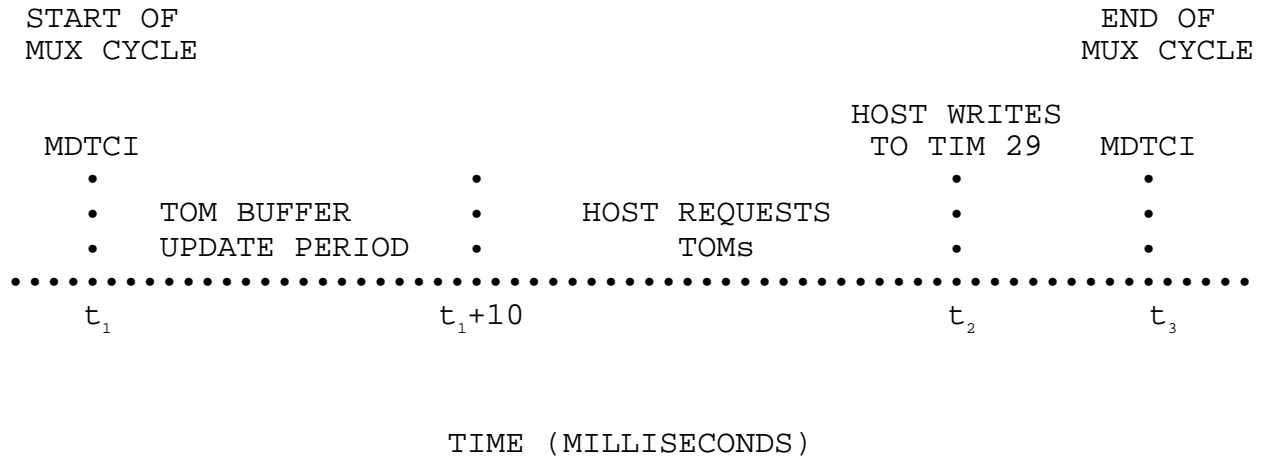
80.1.4.5.2 Terminal Output Message (TOM) Rates. The SICP will update the TOM 1 buffers once per MUX cycle (see Table VIII-II for TOM definitions). The other TOM buffers will be updated on an as-required basis with a maximum rate of once per MUX cycle. The updating of TOM buffers will occur in the ten milliseconds following the MDTCI (see Figure VIII-II).

80.1.4.6 Host to IU Data Transfer. The following messages will be used to transfer data from the Host to the IU. See Table VII-I for subaddress definitions.

80.1.4.6.1 Terminal Input Message No. 1 - Initialization Data (General). This message will be used to convey an initialization data block to the IU. The first word in each block will be a checksum for that block of data. The second word will be a control word which identifies the block being transferred and the extent of the data. In itialization data will comprise the remainder of the block. (See 80.1.4.8.1.1.2 for detailed data format). The data exchange will be as described below.

Terminal Input Message 1 will be used to convey each of the initialization blocks. The format for these blocks is given in Appendix III.

The Host can use this TIM in one of three ways: during start-up; to do an initialization "Restart"; and to make an initialization "Data Change". During an Initialization Start-Up (See 80.1.4.6.1.1) or Restart (See 80.1.4.6.1.2) the Host will transfer the data in 32-word blocks; any data words ("data words" are words 3-32 in each Initialization Block) that are outside the bounds defined by the Starting Data Word and Data Word Count in the Control Word (see 80.1.4.8.1.1.2.2) must be set to zero by the Host. For an Initialization Data Change (see 80.1.4.6.1.3), the "32-word blocks" restriction does not apply.



WHERE

- (1) $t_3 - t_1 \geq 20$ msec.
- (2) No restriction on $t_2 - (t_1 + 10)$
- (3) If $t_2 - t_1 \geq 20$ msec, then $t_3 = t_2$

NOTES

- (1) The MDTCI (MUX Data Transfer Complete Interrupt) is supplied to the SICP by the IU MUX Port.
- (2) From time t_1 to $(t_1 + 10)$ the IU Mux Port shall respond "Busy" to Host requests for TOMs.

FIGURE VIII-II. MUX CYCLE

80.1.4.6.1.1 Initialization Start-Up. While doing its internal processing during start-up, the IU will set the Initialization Status Field in Word 4 of Terminal Output Message 1 (see 80.1.4.8.2.1.2) to "No Statement". The IU then checks (non-volatile) Global Memory. If Global Memory does not hold a valid Platform Identifier, the IU sets Initialization Status to "Platform Identifier Requested". In this state, the Host can specify only Time of Day (via Initialization Block 63 - see 30.4.23.5 or TIM 16 - see 80.1.4.6.6.3) or an Initialization Block 0 (see 30.4.1) with the Platform Identifier specified. For the Block 0, the Block Count and Load Command fields are "Don't Care".

If Global Memory holds a valid Platform Identifier but not a complete set of valid Initialization data, the IU loads the entire set of default data corresponding to the Platform Identifier and sets Initialization Status to "Awaiting Load". If Global Memory holds a complete set of valid Initialization data, the IU will re-initialize the Terminal using this data without any Host input needed.

When Initialization Status is "Awaiting Load", the Host will submit its Initialization data (consisting of a (sub)set of Initialization Blocks 1 - 63). While the Host is sending these blocks, the IU will set Initialization Status to "Load in Progress". Following the final (non-block 0) Initialization Block (if any - none need to be sent), the Host will submit a final Block 0 with the Block Count set appropriately and the Load Command set to "Load Complete". The Platform Identifier is a "Don't Care" field in this final Block 0.

The IU will then set Initialization Status to "Validity Test in Progress". Following the validity checks, the IU will set Initialization Status to the value 4 ("Load Complete - Valid Data or the Host has submitted a Start Net Entry Command following a Bad Load") or to the value 5 ("Load Complete - Load Error Detected") as appropriate.

If Initialization Status is 5, the IU will output the reasons for failure in Status Block 1, Words 7-15 (see 40.5.1.17, 40.5.1.8 and 40.5.1.9). The IU then awaits a Start Net Entry command or an Initialization Restart command from the Host. If the Host submits a Start Net Entry command, the IU will set Initialization Status to the value of 4. Initialization Restarts are described in 80.1.4.6.1.2.

80.1.4.6.1.2 Initialization Restart. To generate an initialization restart, the Host will submit a Block 0 with the Load Command set to "Restart Load use Current Data" or "Restart Load use Defaults" and the appropriate Platform Identifier. The Block Count field is a "Don't Care" in this Block 0.

After processing the initial Block 0, the IU will set the Initialization Status field in Terminal Output Message 1, Word 4, to "Awaiting Load" and the IU-Host exchange will follow the pattern given in 80.1.4.6.1.1.

80.1.4.6.1.3 Initialization Data Change. To generate an initialization data change, the Host will just submit a (sub)set of Initialization Blocks 1 - 63 (without a preceding or following Block 0). The first word in this block, normally a checksum, will be a "Don't Care". The other words will be as given in Appendix III. The IU's validity checks of these received initialization blocks will be given in the data change validity error field in TOM 1, word 4 (see 80.1.4.8.2.1.2) and the Data Conflict bit in Ongoing Status Word 2 (see 40.5.1.4).

In some cases, as noted in specific locations of Appendix III, it is necessary, for the Host to submit 'Restart Use Current Data', to have the terminal perform validity checking of data changes.

80.1.4.6.2 Terminal Input Messages 2 through 11 - Common Carrier. These terminal input messages will be used to convey to the IU one to ten common carrier messages for transmission. Each common carrier message will generate a block of data consisting of 10 words of header plus 5-120 words of message body. The message body consists of the appropriate initial, extension and continuation words as found in the JINTACCS JTIDS TIDP.

The message control header will contain information which will allow the DPG to accomplish the transmission without any a priori knowledge of the message being transmitted. The format for the header is given in 80.1.4.8.1.2.2.2.

The first word in subaddress 2 will contain the number of subaddresses (the Subaddress Counter) used in this common carrier message cycle for common carrier messages. This number will be 1 - 10. The block of data for the first message will start at word 2 of subaddress 2 and continue in consecutive words from there. If necessary, the information for this first message will continue onto subaddresses 3, 4 and 5. In these succeeding subaddresses, all 32 words will be used for data. The Host will ensure that the Subaddress Counter is set appropriately if the message extends onto subaddresses 3, 4, 5, or 6.

After the first common carrier message block, the Host will either present a second common carrier message or, implicitly, tell the SICP that no such second message follows and the SICP should await a new TIM 2 to restart the common carrier message cycle. If a second message is to be sent, the Host can start the second message data block either immediately after the end of the first message block or at the start of the next subaddress. The SICP reactions to various Host actions are given in Table VIII-II.

If a second common carrier message is sent, the Host will use the same procedure as given in Table VIII-II for informing the SICP whether or not a third common carrier message follows and, if applicable, in placement of the third message data block.

If a common carrier message block does not end at the thirty-second word of a TIM, the Host must always send a word of zeroes or start a new message header in the word following the message block.

Any time the Host submits a TIM 2, the SICP will assume a new common carrier message cycle has begun, whether or not the subaddress counter of the previous common carrier message cycle has been fulfilled.

80.1.4.6.3 Terminal Input Message 12. Reserved for use by MIDS.

80.1.4.6.4 Terminal Input Messages 13 and 14 - Target Sorting messages. NAVY AIR ONLY. These terminal input messages will be used to convey Target Sorting messages to the IU for buffering and subsequent transmission. Each Terminal Input Message will be capable of conveying a Target Sorting message. Each Terminal Input Message will include the following:

- a. A loopback ID data word for the Target Sorting message. The assignment of a non-zero loopback ID number by the Host will identify to the IU that a subsequent loopback status indication is required (See 80.1.4.7.1.7). The indication will be provided within 100 milliseconds after a change in status occurs.
- b. An indication of the age for the Target Sorting message. Age indicates how old the data is at the time it was sent to the IU.
- c. Host-defined ID of the Target Track described in this Target Sorting message.
- d. The Message Length (2 - 4 TADIL J words) and Group (A/B) indicators.
- e. A fully composed Target Sorting message less the TADIL J header and parity bits.

TABLE VIII-III. COMMON CARRIER MESSAGE PROTOCOL

CASE NO.	STATUS OF CONTROL VARIABLES		HOST ACTIONS		SICP REACTION
	MSG 32	NSC	NEXT 0	NSUB 0	
1	YES	YES	N/A	YES	RETURNS TO READ NEW TIM 2
2	YES	YES	N/A	NO	ASSUME COMMON CARRIER MESSAGE BLOCK 2 STARTS AT WORD 1 OF NEXT SUBADDRESS AND FOLLOWS IN CONSECUTIVE WORDS FROM THERE
3	YES	NO	N/A	N/A	SAME AS CASE 1
4	NO	YES	YES	YES	SAME AS CASE 1
5	NO	YES	YES	NO	SAME AS CASE 2
6	NO	YES	NO	YES, NO	ASSUMES COMMON CARRIER MESSAGE BLOCK 2 STARTS AT THE WORD IMMEDIATELY FOLLOWING THE FIRST MESSAGE BLOCK AND FOLLOWS IN CONSECUTIVE WORDS FROM THERE
7	NO	NO	NO	N/A	SAME AS CASE 6
8	NO	NO	YES	N/A	SAME AS CASE 1

DEFINITIONS OF VARIABLES

1. MSG 32 - THE FIRST MESSAGE DATA BLOCK ENDS AT THE THIRTY-SECOND (i.e., LAST) WORD OF A SUBADDRESS.
2. NSC - THE SUBADDRESS COUNTER, GIVEN IN WORD 1 OF TIM 2, SPECIFIES THAT THE SICP SHOULD READ THE NEXT SUBADDRESS (i.e., THE SUBADDRESS IMMEDIATELY FOLLOWING THE ONE THAT INCLUDED THE END OF THE FIRST MESSAGE DATA BLOCK).
3. NEXT0 - THE HOST SETS THE WORD IMMEDIATELY FOLLOWING THE FIRST DATA BLOCK TO IDENTICALLY ZERO. IF THIS VARIABLE IS "NO", THE HOST HAS SET THIS WORD TO THE FIRST WORD OF THE SECOND MESSAGE HEADER.
4. NSUB0 - THE HOST SETS THE FIRST WORD IN THE NEXT SUBADDRESS TO IDENTICALLY ZERO.

The Host will issue the input messages to the IU to initiate the radio transmission of the sensor target data and/or the intent to engage a surveillance track. The IU will accept the input (See 80.1.4.8.1.4.2 for detailed data formats) and will submit the data to the NICP for transmission until the transmit protocol is satisfied or until the Host terminates the transmission, whichever is applicable. The SICP will assume that the Host has terminated the transmission for a track when the time since the last update of a track reaches fifteen seconds.

If the Host uses these TIMs, the Host should avoid concurrently using the NPG buffers (for metering common carrier messages).

80.1.4.6.5 Terminal Input Message 15 - Air Platform and System Status Message. NAVY AIR ONLY. This terminal input message will be used to convey an Air Platform and System Status Message to the IU for transmission. The Terminal Input Message will include the following:

- a. A loopback ID data word. The assignment of a non-zero loopback ID number by the Host will identify to the IU that subsequent loopback status indication is required. (See 30.7.1.7). The indication will be provided within 100 milliseconds after a change in status occurs.
- b. A status bit which indicates if any portion of the message other than fuel quantity has changed since the last message input.
- c. A word which indicates message priority.
- d. A fully composed status message less the TADIL J header and parity bits.

The Host will issue the input message to the IU to initiate the transmission of the Air Platform and System Status Message. The IU will accept the input (See 30.8.1.5.2 for detailed data format) and perform the processing necessary to ensure the information is transmitted in accordance with the network protocol specified in the JINTACCS JTIDS TIDP.

After the initial issuance, the Host will use the Terminal Input Message to update the information so that it is current at the time of transmission. The IU will continue to submit the data to the NICP for transmission until the transmit protocol is satisfied or until the Host terminates the transmission, whichever is applicable. The IU will assume that the Host has terminated the transmission whenever the IU fails to receive the Terminal Input Message within thirty seconds.

80.1.4.6.6 Terminal Input Message 16 - NAVY SHIP - Requests for Data, Control Inputs, R/C Responses, and TSR Inputs - NAVY AIR - Requests for Data, Control Inputs, R/C Responses, Advanced Slot Notification/Composite Blanking Specific Slots and Controls, Net Selection Inputs, and TSR Inputs. NAVY SHIP - This terminal input message will be used to convey requests for data, control settings, R/C Responses, and TSR inputs to the IU. The information will be provided in the format specified in 80.1.4.8.1.6.2. NAVY AIR - This terminal input message will be used to convey requests for data, control settings, R/C Responses, Advanced Slot Notification/Composite Blanking Specific Slots and Controls, Net Selection Inputs and TSR inputs to the IU. The information will be provided in the format specified in 80.1.4.8.1.6.2 and transmitted on an as-required basis.

80.1.4.6.6.1 Requested data. Data Words 1 and 2 will be used to request the current contents of any memory location. Upon receipt of a valid data request, as indicated by the "Request Type" field in Data Word 1, the IU will transfer to the Host the contents of the specified location and subsequent locations until the total number of transferred words equals the "Word Count" (maximum of 30 words) specified in bits 0 through 4 of either Data Word 1 (for physical addressing) or Data Word 2 (for data word code). Terminal Output Message 28 will be used to convey the requested information. The data will be available for transfer to the Host within 100 ms of the request.

80.1.4.6.6.2 Control Inputs #1. Data Word 3 will be used to supply various control settings and validity bits for the settings. When a bit is set to invalid, the IU will ignore the setting information.

80.1.4.6.6.3 Time of Day. Words 4 and 5 are used to provide a time of day input to set the DPG chronometer. A validity bit is included in Word 5.

80.1.4.6.6.4 R/C Response. Data Words 6 and 7 will convey the Host's response to a message that requires Host acknowledgement. The acknowledgement will consist of the Host's response and a receipt/compliance ID number which the SICP assigned at the time the message was forwarded to the Host.

80.1.4.6.6.5 Control Inputs #2. Data Word 8 will supply a second set (the first set is in word 3) of control settings. Validity bits are included for this word. When a bit is set to invalid, the IU will ignore the setting information.

80.1.4.6.6.6 Advanced Slot Notification/Composite Blanking Specific Slots. NAVY AIR ONLY. Data Words 9 - 14 contain specific slots within the next 6.4 minutes for which the IU is to provide Advanced Slot Notification and/or Composite Blanking (ASN and CB controls are given in word 15). Each word will have the same format as for a specific slot in a common carrier message (See Header Word 7 in 80.1.4.8.1.2.2.2).

80.1.4.6.6.7 Advanced Slot Notification and Composite Blanking Controls. NAVY AIR ONLY. Data Word 15 has Composite Blanking and Advanced Slot Notification Controls and a validity bit. For Composite Blanking, the Host will specify logic level (true/inverted) and enable/disable. For Advanced Slot Notification, the Host will specify enable/disable.

80.1.4.6.6.8 Net Selection Inputs. NAVY AIR ONLY. Data Words 16 - 17 will specify the net number and NPG and a validity bit for a net selection request.

80.1.4.6.6.9 Time Slot Reallocation Inputs. Data Words 18 - 26 will specify the Operate/Suspend and Pool capacity request fields for TSR Pools 0 - 7. The Host will input these words at most every two seconds.

80.1.4.6.7 Terminal Input Message 17 - Host Navigation Data. This terminal input message will be used to transfer navigation data and geodetic position fix measurements from the navigation systems of the Host to the IU. The "NAV System in Use" field in Word 1 defines the source of the navigation data. Position, velocity, and attitude will be provided, as specified by the validity fields in Word 1. Data will be assumed valid at the time of computation given in Words 11-12 and 16-17, unless a time offset is provided in Initialization Block 56, Word 17. NAVY AIR ONLY - Geodetic fix updates will be provided to the IU, as specified in Word 2. The time at which the update is valid will be given by Words 3 - 4, unless a time offset is provided in Initialization Block 56, Word 17. Dead Reckoning (D/R) data will be provided at least once every 250 ms. Geodetic fix updates will be provided as available. NAVY SHIP ONLY - Dead Reckoning (D/R) data will be provided at a nominal rate of once per 125 ms. If the applied velocity corrections exceed 0.2 feet/second or the applied tilt corrections exceed 2 arc seconds in the WSN-5 or CVNS, then JTIDS navigation performance may be degraded.

80.1.4.6.8 Terminal Input Message 18 - External Time Reference Data. This terminal input message will be used to transfer External Time Reference (ETR) measurements from the Host to the IU. It shall be sent within one second after the External Time Reference pulse whose time it defines.

80.1.4.6.9 Terminal Input Message 29 - MUX Control. This terminal input message is used to tell the IU MUX port that the Host has finished requesting terminal output messages for the current MUX cycle (see 80.1.4.4.6 and Figure VIII-II).

80.1.4.6.10 Terminal Input Message 30 - Clock Synchronization Data. NAVY AIR ONLY. This terminal input message will be used to transfer clock synchronization data from the Host Computer to the IU. If the Time Offset Word in Initialization Block 56, Word 17 indicates that the time tags in the Host Navigation Data MUX Block (TIM 17) are invalid, then this terminal input message will be provided before the first MUX block containing valid NAV data.

If Initialization Block 56, Word 17 indicates that time offsets are valid, this terminal input message will not be required.

80.1.4.7 IU to Host Data Transfer. The messages described in Table VII-II and Paragraphs 80.1.4.7.1 through 80.1.4.7.6 will be used to transfer data from the IU to the Host.

80.1.4.7.1 Terminal Output Message 1 - Tape Recording Word Count, Received Message Word Count, Control Settings, Operational and Initialization Status, Chronometer Time of Day, Loopback Status #1, Number of NPG Buffers available, Relay Inhibit Status, Operational Status, Time Quality, TSR Data Message Status and TSR Pool Status and (For Navy Air Only) Number of Target Sorting Buffers Available, Advanced Slot Notification Status, Composite Blanking Status and Host NPG Filter Status.

The terminal output message will be used to convey Tape Recording Data Word Count, the quantity of assembled Received Message Data, Control Settings, Loopback Status, Operational and Initialization Status, number of NPG buffers available, Chronometer Time of Day, the Number of Buffers available in the 60-Message TSR Data Message Buffer, Relay Inhibit Status, TSR Pool Status and Time Quality to the Host. In addition, (For NAVY AIR ONLY), TOM 1 shall convey the number of Target Sorting Buffers available, the status of Advanced Slot Notification, Composite Blanking and Host NPG Filters. This information shall be transmitted in the formats specified by 80.1.4.8.2.1.2 in every MUX cycle.

80.1.4.7.1.1 Received Message Data Word Count. Data Word 1 will be used to convey the number of 16-bit words of received message data (including the message headers) assembled in the last MUX cycle. The count will include only the data that is completely assembled and can be retrieved at that time. The operational usage of this information is amplified in 80.1.4.7.2. This word will also designate if the SICP has deleted a message in the previous MUX cycle due to a received message buffer overflow.

80.1.4.7.1.2 Control Settings. Data Words 2 and 3 will be used to convey DPG Control Settings. For variables adjustable by TIM 16, these words will reflect the Host-requested changes within 100 ms of receipt of a TIM 16.

80.1.4.7.1.3 Operational and Initialization Status. Data Words 4 and 18 will be used to convey an indication of how well the DPG is performing its major functions. Initialization status will be sent to the Host to indicate the IU's request for or response to initialization data from the Host.

80.1.4.7.1.4 Chronometer Time of Day. Data Words 5 and 6 will be used to convey the Chronometer Time of Day at which the SICP wrote to the TOM 1 buffer. When coarse sync is confirmed by the Terminal, the Chronometer Time of Day corresponds to JTIDS Time of Day.

80.1.4.7.1.5 Time Tag. Data Word 7 will be used to convey the Time Tag (system time) corresponding to the JTIDS Time of Day given in Words 5 and 6.

80.1.4.7.1.6 Tape Recording Data Word Count and TSR Pool Validity Bits. Data Word 8 will be used to convey the number of 16 bit words (0-224) of data assembled by the IU for MUX tape recording in the last MUX cycle, and the eight TSR Pool Validity bits. The tape recording word count will include only the data that is completely assembled and can be retrieved at that time. The usage of this data is amplified in 80.1.4.7.3. If the Tape Recorder Port Selection, 30.4.2.4, is set to TSRD, then this value will be zero. The TSR Pool Validity bits will report for TSR Pools 0-7 the validity of their data in the previous initialization load (see 30.4.13).

80.1.4.7.1.7 Loopback Status #1. Data Words 9-14 will be used to convey the transmission and receipt/compliance status of up to 3 TADIL J messages or, for NAVY AIR ONLY, certain R/C Responses (80.1.4.6.6.4) that were sent to the IU for transmission. Loopback Status #2 is in Terminal Output Message 29, words 16-29.

80.1.4.7.1.8 NPG Buffers Available. Data Word 15 will give the status (0-20 buffers available) of the three NPG Buffers.

80.1.4.7.1.9 Target Sorting Buffers Available. Not used by Navy Ship. Data Word 16 will give the status (0 - 40 buffers available) of the two Target Sorting Buffers.

80.1.4.7.1.10 Advanced Slot Notification, Composite Blanking, Relay Inhibit Status and TSR Data Message Buffer Status. For Navy Air, Data Word 17 presents enable/disable status for Advanced Slot Notification, and Composite Blanking and Logic Level (true/inverted) of Composite Blanking. For both Navy Air and Ship, this word contains enable/disable status of Relay Inhibit as well as the number of buffers available (0 - 60) for messages on the TSR NPG.

80.1.4.7.1.11 Operational Status and Time Quality. Data Word 18 will be used (along with Data Word 4) to convey DPG status and Time Quality.

80.1.4.7.1.12 Host NPG Filter Status. NAVY AIR ONLY. Data Words 19 - 20 will convey the current settings of the Host NPG Filters.

80.1.4.7.1.13 TSR Status. Data Words 21 - 22 will convey TSR Pool Status for one of the TSR pools 0 - 7, if the Terminal is operational for that Pool. This data will consist of the first two status words of the pool, as specified in Status Block 30 (40.5.25).

80.1.4.7.2 Terminal Output Messages 2 through 20 - Received Message Data. These terminal output messages along with TOM 1 will be used to transfer messages received from the network to the Host. The data exchange will be described below.

The IU will subject all messages extracted from the network to the filtering requirements of 3.2.1.2.3.2 of DCB79S4000 and the filtering instructions supplied by TIM 1 (initialization data). This includes the filter for addressed messages, as described in 30.4.5, and for NAVY AIR ONLY NPG Filters as described in 80.1.2.14.5.

The messages which satisfy the filter criteria will be assembled into blocks consisting of five words of header plus 5 to 120 words of message body and will be stored in sequential order. The header format is given in 80.1.4.8.2.2.2. The message body consists of the TADIL J initial, extension and continuation words or non-voice free text messages as defined in the JTIDS JINTACCS TIDP. The first message block will begin at Word 1 of subaddress 2 and will continue in consecutive words from there. If necessary, the information for the first message will continue onto subaddresses 3, 4 and 5. Each later message block will follow immediately after the preceding one until all blocks have been included. There may be partial or multiple message blocks in a given 32-word subaddress.

Time slots containing multiple fixed format messages will require the IU to duplicate the header information so that the data can be assembled in the header/message, header/message, (etc.) format. The IU will count the number of 16-bit words assembled as specified in 80.1.4.7.1.1 and supply the word count in TOM 1.

Based on the word count, the Host will issue the required number of command words needed to transfer the data. The IU is not required to retain any data which is not requested prior to the Host's write to TIM 29 which ends the Host's TOM request period in the MUX cycle (see 80.1.4.4.6 and Figure VIII-II).

If a non-Indirect PPLI Relative Position Continuation Word is to be sent to the Host, the IU will convert from the U, V Cartesian Coordinate system to a relative-grid latitude/longitude format for transmittal to the Host. The continuation word format is provided in Figure VIII-III.

NAVY AIR ONLY - The number of subaddresses used to transfer received messages to the Host shall not exceed the number provided by the Host in the MUX Message Rate Word, Block 56, Word 3 (80.1.2.14.1). Also, any messages received in certain NPGs, in accordance with NPG Filter settings (80.1.2.14.5), shall not be passed to the Host.

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	Q _{PR}				0	Q _{AR}			0	CONTINUATION WORD LABEL					WORD FORMAT	
wd 2	M S B	RELATIVE LATITUDE (WORD 1)														
wd 3	RELATIVE LATITUDE (WORD 2)															L S B
wd 4	M S B	RELATIVE LONGITUDE (WORD 1)														
wd 5	RELATIVE LONGITUDE (WORD 2)															L S B

<u>FIELD NAME</u>	<u>POSITION</u>	<u>CODING</u>
WORD FORMAT	WORD 1, BITS 0-1	01
CONTINUATION WORD LABEL	WORD 1, BITS 2-6	11111
SPARE	WORD 1, BITS 7&11	00
RELATIVE AZIMUTH QUALITY (Q_{AR})	WORD 1, BITS 8-10 IV-V	SEE TABLE
RELATIVE POSITION QUALITY (Q_{PR})	WORD 1, BITS 12-15 IV-V.	SEE TABLE
RELATIVE LATITUDE	WORDS 2-3	32-BIT BAM (SEE TABLE IV-III) RANGE = $\sqrt{90}$ deg
RELATIVE LONGITUDE	WORDS 4-5	32-BIT BAM (SEE TABLE IV-III) RANGE = $\sqrt{180}$ deg

FIGURE VIII-III. PPLI RELATIVE POSITION CONTINUATION WORD

80.1.4.7.3 Terminal Output Messages 21 through 27 - Tape Recording Data.

These terminal output messages will be used to transfer tape recording data from the IU to the Host. The Host determines the extent of this data via the Recorder Control Words, 30.4.3.6. The data exchange is described below.

Based on the word count (in TOM 1, see 80.1.4.7.1.6), the Host will issue the required number of command words needed to transfer the "assembled" tape recording data.

The IU is not required to retain any data which is not requested prior to the Host's write to TIM 29 which ends the Host's TOM request period in the MUX cycle (see 80.1.4.4.6 and Figure VIII-II).

To support these TOMs, the SICP keeps a 700-word local memory buffer to store tape recording data. The SICP inputs data blocks into this buffer in sequential order and separates the blocks by one word containing the hexadecimal pattern "CAFE". When the SICP receives the MDTCI, and it is initialized for tape recording on the MUX, the SICP transfers 0 - 224 words from the local memory buffer to the TOM 21 - TOM 27 buffers and puts the TOM 21 - TOM 27 word count into TOM 1, Word 8. No provision is made to keep the data blocks intact in this transfer; thus, the beginning of TOM 21 and/or the end of TOM 27 may contain partial blocks. The SICP then frees these 0-224 local memory words to accept new data. Any tape recording data generated by the IU that does not fit into the available area of the local memory buffer is deleted. To avoid this deletion of data, it is the Host's responsibility to set the Recorder Control Words appropriately to meet the IU's output rate onto TOM 21 - 27.

80.1.4.7.3.1 Terminal Output Messages 21 through 27 Using Standard (Non-Flycatcher) Methodology. NAVY AIR ONLY. If the Host has not chosen the Flycatcher option in Initialization Block 58, Word 21, the IU will send data as determined by the Recorder Control Words (See 30.4.3.6).

80.1.4.7.3.2 Terminal Output Messages 21 through 27 using Flycatcher Methodology. NAVY AIR ONLY. If the Flycatcher option is chosen in Initialization Block 58, Word 21, the IU will use the methodology as specified by the Host in Words 3 - 20 of Initialization Block 58 (See 80.1.2.16.1 through 80.1.2.16.5).

80.1.4.7.4 Terminal Output Message 28 - Host-Requested Data. This terminal output message will be used to convey data to the Host that was requested by Terminal Input Message 16. The data exchange is described in Paragraph 80.1.4.6.6.1. Data Words 1 and 2 will be used to convey the starting address and word count of the Data to follow in Data Words 3 through 32. If words 1 and 2 match the TIM 16 request, the Host will consider the data valid. If word 1 is zero or words 1 and 2 do not match the TIM 16 request, the Host will consider the data that follows as invalid. The data will be available for transmission to the Host within 100 ms of the receipt of the TIM 16 request. The number of words transferred (up to a maximum of 30) is specified by TIM 16.

Upon receiving the MDTCI, the SICP shall transfer to the TOM 28 buffer the latest response block (if one exists) that has been generated since the previous MDTCI. If no new response block exists, the SICP shall zero the first word of the current TOM 28 buffer.

For an Initialization or Status Block request, the Host should assume that the words outside the bounds specified by the Starting Data Word and Data Word Count are invalid.

80.1.4.7.5 Terminal Output Message 29 - Loopback Status #2 and, for Navy Air Only, TACAN and Net Selection Status. This terminal output message will be used to convey Loopback Status Data to the Host. Also, for NAVY AIR ONLY, it shall convey TACAN and Net Selection Status data.

80.1.4.7.5.1 TACAN Data. NAVY AIR ONLY. Data Words 1 - 13 will be used to convey the 13 words of TACAN Status Data as given in Words 3 - 12 and 15 - 17 in Status Block 14 (See Paragraph 40.5.13 and its subparagraphs). This data will be updated at a 20 Hz rate by the IU for presentation in this message.

80.1.4.7.5.2 Net Selection Status. NAVY AIR ONLY. Words 14 and 15 will present the Net Selection Counter, Status, requested net and requested NPG of a net selection request. This data will be updated to reflect the most-current net selection request within 50 ms of its reception by the IU.

80.1.4.7.5.3 Loopback Status #2. If the Loopback Control variable in Word 16 of Initialization Block 56 (See 80.1.2.14.8) is set to allow the IU to report Loopback Status on a maximum of ten messages per MUX cycle, the Loopback Status for messages 4-10, if such information is available, will be presented in words 16-29. Loopback Status for the first three messages is given in Terminal Output Message 1.

80.1.4.7.6 Terminal Output Message 30 - Terminal Navigation Data. This message will be used to provide Terminal navigation data to the navigation systems of the Host. JTIDS Navigation System Definition, as well as an indication of data validity, are provided in Word 1. The Nav Data Time Tag provided in Word 2 will be the time tag (JTIDS system time) at which the associated navigation data is valid. This data will be updated nominally every 250 milliseconds.

80.1.4.8 Message Formats. The detailed message formats are defined in the following pages.

80.1.4.8.1 Host to IU Messages.

80.1.4.8.1.1 Message Format for Terminal Input Message 1 - Initialization Data.

80.1.4.8.1.1.1 Command Word.

All Terminal Input Messages

Command Word from IU

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
TERMINAL ADDRESS					0	SUBADDRESS/MODE					WORD COUNT/MODE CODE				
0	0	0	0	1											

The bit designation shall be as follows:

BIT DESIGNATION
 0-4 WORD COUNT/MODE CODE
 THE NUMBER OF DATA WORDS IN THIS TIM OR THE MODE CODE.
 RANGE: 0 - 31

NOTE: WORD COUNT = 0 SPECIFIES 32 DATA WORDS. SEE 80.1.4.4.1.1 FOR APPLICATION AS THE MODE CODE, WHEN THE SUBADDRESS/MODE FIELD IS 0 OR 31.

5-9 SUBADDRESS/MODE.
 THIS VALUE IS SET TO THE TIM SUBADDRESS NUMBER BEING SENT BY THE HOST TO THE IU.
 RANGE: 1 - 30 (SEE TABLE VIII-I).

NOTE: VALUES 0 AND 31 ARE USED FOR MODE COMMANDS (SEE 80.1.4.4.1.1)

10 T/R BIT
 SET TO LOGIC 0 (RECEIVE)

11-15 TERMINAL ADDRESS - SET TO "00001" (SEE 80.1.4.4.1).
 NAVY SHIP ONLY - SEE (Y207A135-3.2.5.3.1(J))
 NAVY AIR ONLY - SEE (Y207A134-3.2.5.2.3(J))

80.1.4.8.1.1.2 Data Words. The data word definitions and formats are given below.

<u>WORD NO.</u>	<u>PARAMETERS</u>
1	CHECKSUM
2	CONTROL WORD FOR INITIALIZATION BLOCK
3-32	INITIALIZATION DATA

TERMINAL INPUT MESSAGE 1

80.1.4.8.1.1.2.1 Terminal Input Message 1 Word 1

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
CHECKSUM															

The Checksum will be a sequential EXCLUSIVE OR computation of the aligned bits of all words in the block except the Checksum word itself. All words not included within the designated word count will be set to zero.

80.1.4.8.1.1.2.2 Terminal Input Message 1 Word 2

CONTROL WORD															
MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
BLOCK ID						SDW					DATA WORD COUNT (DWC)				

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
------------	--------------------

0-4	DATA WORD COUNT (DWC) THE NUMBER OF CONTIGUOUS VALID DATA WORDS INCLUDING THE STARTING DATA WORD. IF A FULL BLOCK OF DATA IS TO BE TRANSMITTED, THIS FIELD WILL BE SET TO 30. RANGE: 1 - 30
5-9	STARTING DATA WORD (SDW) THE FIRST WORD OF THE INITIALIZATION DATA BLOCK IN WHICH VALID DATA IS AVAILABLE. IF A FULL INITIALIZATION BLOCK IS TO BE TRANSMITTED, THIS FIELD WILL BE SET TO 2. RANGE: 2 - 31 THIS VARIABLE USES THE DPG'S INTERNAL NUMBERING SYSTEM AS DESCRIBED IN 30.4.1.2.
10-15	BLOCK ID. RANGE: 0 - 63

NOTE: ALTHOUGH BITS 0-9 OF THIS WORD DEFINE THE STARTING DATA WORD AND FOLLOWING NUMBER OF WORDS OF VALID DATA, THE HOST WILL SEND 32 WORDS OF INFORMATION DURING "START-UP" AND "RESTART" INITIALIZATION (SEE 80.1.4.6.1). THE IU WILL IGNORE ALL WORDS NOT FALLING WITHIN THE LIMITS OF THE STARTING DATA WORD AND THE DATA WORD COUNT.

TERMINAL INPUT MESSAGE 1

80.1.4.8.1.1.2.3 Terminal Input Message 1 Words 3-32

MSB															LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
INITIALIZATION DATA																

The bit designation shall be as follows:

Initialization Data is defined in Appendix III.

INITIALIZATION DATA WORDS THAT FALL OUTSIDE THE RANGE DEFINED BY DATA WORD COUNT AND STARTING DATA WORD WILL BE SET TO ZERO BY THE HOST.

TERMINAL INPUT MESSAGE 1

80.1.4.8.1.1.3 Status Word. The format for the Status Word is given below.

All Terminal Input Messages
Status Word from IU

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
TERMINAL ADDRESS					ME						B	B	S		TF
0	0	0	0	1							C		S		

The bit designation shall be as follows:

BIT DESIGNATION

0	TERMINAL FLAG (TF)
1	NOT USED BY NAVY
2	SUBSYSTEM FLAG (SS)
3	BUSY (B)
4	BROADCAST COMMAND RECEIVED (BC)
5-9	NOT USED BY NAVY
10	MESSAGE ERROR (ME)
11-15	TERMINAL ADDRESS - SET TO "00001" (SEE 80.1.4.4.1). <u>NAVY SHIP ONLY</u> - SEE (Y207A135-3.2.5.3.1(J)) <u>NAVY AIR ONLY</u> - SEE (Y207A134-3.2.5.2.3(J))

- NOTE: (1) SEE 80.1.4.4.2 FOR STATUS BIT DEFINITIONS. ALL BITS NOT USED ARE SET TO ZERO.
- (2) FOR BITS 0, 2, 3, 4 and 10, LOGIC 1 = TRUE, LOGIC 0 = NOT TRUE

80.1.4.8.1.2 Message Format for Terminal Input Messages 2 through 11 - Common Carrier Messages.

80.1.4.8.1.2.1 Command Word. See 80.1.4.8.1.1.1.

80.1.4.8.1.2.2 Data words. For subaddress 2, the word definitions and formats are given below:

<u>WORD NO.</u>	<u>PARAMETERS</u>
1	COMMON CARRIER SUBADDRESS COUNT
2-32	COMMON CARRIER MESSAGE DATA

For subaddresses 3 through 11 all 32 data words contain common carrier message data.

TERMINAL INPUT MESSAGE 2-11

Terminal Input Message 2 Word 1

MSB												LSB			
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
												SC			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-3	SUBADDRESS COUNT (SC) THE NUMBER OF SUBADDRESSES USED (IN THIS COMMON CARRIER MESSAGE CYCLE) TO SEND COMMON CARRIER MESSAGE DATA TO THE IU. RANGE: 1 TO 10 VALUES 0, 11-15 ARE NOT USED BY NAVY
4-15	SPARE

80.1.4.8.1.2.2.1 Common Carrier Message Data. Terminal Input Message 2, Word 2 through Terminal Input Message 11, Word 32.

The Host will convey to the IU data blocks for each of 1 to 10 common carrier messages starting at word 2 of subaddress 2 as described in paragraph 80.1.4.6.2. Each message block will consist of 10 words of header plus 5-120 words of message body.

80.1.4.8.1.2.2.2 Message Header. Each header consists of the 10 words specified below. The first header will be placed into subaddress 2, words 2-11. 61

0.08 Each later header will follow immediately after the message body of the previous message data block or at the start (i.e., word 1) of the next subaddress (see 80.1.4.6.2).

MESSAGE HEADER DATA WORDS

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	1	DATA AGE														
wd 2	E												PL		TYPE	
wd 3													LENGTH			
wd 4								NPG								
wd 5		PRIORITY														
wd 6		STALENESS LIMIT														
wd 7	SPECIFIC SLOT														SET	
wd 8	R E P												HOP COUNT			
wd 9	R / C				LOOPBACK ID											
wd 10		STN														

Terminal Input Messages 2 - 11 Header Word 1

MSB														LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
1	DATA AGE														

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-14	DATA AGE
	LSB: 1 SLOT = 0.0078125 SECONDS
	RANGE: 0 - 32767 SLOTS

NOTE: WHEN EXTRAPOLATION IS REQUIRED, THE FIELD DEFINES THE AGE OF THE DATA AT THE TIME IT IS CONVEYED TO THE IU. WHEN EXTRAPOLATION IS NOT REQUIRED, DATA AGE IS A "DON'T CARE".

TERMINAL INPUT MESSAGE 2-11

<u>BIT</u>	<u>DESIGNATION</u>
15	SET TO LOGIC 1 THIS BIT IS USED BY THE SICP TO IDENTIFY THE START OF A MESSAGE HEADER.

Terminal Input Messages 2 - 11 Header Word 2

MSB											LSB				
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
E											PL			TYPE	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-1	DATA TYPE
BIT	1 • 0
	••••••••
	0 • 0 FREE TEXT UNCODED
	0 • 1 FREE TEXT CODED
	1 • 0 FIXED FORMAT
	1 • 1 NOT USED BY NAVY

NOTE: FOR FREE TEXT MESSAGES A SPECIFIC SLOT (HEADER WORD 7) OR AN NPG (HEADER WORD 4) MUST BE SPECIFIED.

2-4 PACKING LIMIT (PL)

BIT	4 • 3 • 2	
	••••••••	
	0 • 0 • 0	NO STATEMENT. USE THE PACKING LIMIT
	• •	DEFINED BY THE MESSAGE STRUCTURE
	• •	WORDS OR THE DEFAULT PACKING LIMIT -
	• •	SEE 30.4.9.2
	0 • 0 • 1	STANDARD (STD) ONLY
	0 • 1 • 0	PACKED-2 DP (P2-DP) OR STD
	0 • 1 • 1	PACKED-2 SP (P2-SP) OR STD
	1 • 0 • 0	PACKED-4, P2-DP, P2-SP OR STD
		ALL OTHER VALUES ARE NOT USED BY NAVY

NOTE: IF THE MESSAGE LENGTH EXCEEDS THE MAXIMUM LENGTH ALLOWED BY THE PACKING LIMIT, THE SICP WILL DELETE THE MESSAGE AND, IF A LOOPBACK ID IS GIVEN IN HEADER WORD 3, WILL PRESENT LOOPBACK STATUS TO THE HOST (LBSTAT=15; SEE TOM 1, WORD 9).

5-14 SPARE

15	EXTRAPOLATION REQUEST (TO TRANSMIT TIME) LOGIC 1 = EXTRAPOLATION REQUESTED LOGIC 0 = EXTRAPOLATION NOT REQUESTED
----	--

TERMINAL INPUT MESSAGE 2-11

NOTE: THE INDIRECT PPLI, AIR TRACK SURVEILLANCE, GROUND TRACK SURVEILLANCE, MARITIME SURFACE TRACK SURVEILLANCE, TARGET SORTING AND PARAMETRIC INFORMATION TADIL J MESSAGES ARE ELIGIBLE FOR EXTRAPOLATION.

Terminal Input Messages 2 - 11 Header Word 3

MSB												LSB			
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
												LENGTH			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-3	LENGTH THE NUMBER OF 70-BIT TADIL J MESSAGE WORDS (FIXED FORMAT), 225-BIT TADIL J MESSAGE WORDS (CODED FREE TEXT), OR 465-BIT TADIL J MESSAGE WORDS (UNCODED FREE TEXT) OF MESSAGE DATA. SEE 80.1.4.8.1.2.2.3 FOR MORE DETAIL. RANGE: 1 - 12 FOR FIXED FORMAT MESSAGES RANGE: 1 - 4 FOR FREE TEXT MESSAGES VALUES 0, 13-15 ARE NOT USED.
4-15	SPARE

Terminal Input Message 2 - 11 Header Word 4

MSB												LSB			
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
												NET PARTICIPATION GROUP			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-8	NET PARTICIPATION GROUP (NPG) 0 = NO STATEMENT. THE SICP WILL USE THE NPG ASSIGNMENT TABLE GIVEN IN Y240M822A0100 <u>FOR NAVY SHIP</u> AND Y240M798A0100 <u>FOR NAVY AIR</u> IF BITS 0 AND 1 OF HEADER WORD 7 (SET) ARE ZERO. 1 - 511 = SELECTED PARTICIPATION GROUP
9-15	SPARE

TERMINAL INPUT MESSAGE 2-11

Terminal Input Messages 2 - 11 Header Word 5

MSB														LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
PRIORITY															

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
------------	--------------------

0-14	PRIORITY PRIORITY REFERS TO PRECEDENCE FOR TRANSMISSION WITHIN THE NETWORK PARTICIPATION GROUP TO BE USED. RANGE: 0000 ₁₆ - 1FFF ₁₆ FOR ALL BUT THE J0.2 MESSAGE 0000 ₁₆ - INDICATES THE LOWEST, 1FFF ₁₆ - THE HIGHEST. FOR A J0.2 MESSAGE, THE PRIORITY MUST BE SET TO 4800 ₁₆ .
------	--

NOTE: FOR A HOST MESSAGE TO TAKE PRIORITY OVER A TERMINAL GENERATED PPLI FOR TRANSMISSION IN A PPLI NPG (5, 6, OR 27), THIS VALUE MUST BE GREATER THAN 1400 (Hex).

15	SPARE
----	-------

Terminal Input Messages 2 - 11 Header Word 6

MSB														LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
STALENESS LIMIT															

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
------------	--------------------

0-14	STALENESS LIMIT THE AGE AT WHICH THE MESSAGE WILL BE DELETED IF NOT TRANSMITTED. LSB: 1 SLOT = 0.0078125 SECONDS. RANGE: 0 = 32640 SLOTS (255 SECONDS) 1 - 32767 = DESIGNATED NUMBER OF SLOTS
------	--

NOTE: AGE IS REFERENCED TO THE SLOT IN WHICH THE TIM IS PROCESSED. NOMINALLY THIS IS ONE SLOT AFTER THE RECEIPT BY THE IU.

15	SPARE
----	-------

TERMINAL INPUT MESSAGE 2-11

Terminal Input Messages 2 - 11 Header Word 7

MSB														LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
SPECIFIC SLOT														SET	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-1	SET SET REQUESTED FOR TRANSMISSION
	BIT 1 • 0 •••••••• 0 • 0 SPECIFIC SLOT/SET NOT REQUESTED 0 • 1 A 1 • 0 B 1 • 1 C
2-15	SPECIFIC SLOT THE 14 LSB's OF THE SLOT, IN THE NEXT 6.4 MINUTES = ONE-HALF EPOCH, REQUESTED FOR TRANSMISSION. RANGE: 0 - 16383
NOTES: 1)	IF "SET" IS NOT SPECIFIED AS 0, THE HOST IS REQUESTING TRANSMISSION IN THE SPECIFIC SLOT.
2)	IF THE HOST REQUESTS RECEIPT/COMPLIANCE (SEE HEADER WORD 9), THIS WORD MUST BE SET TO IDENTICALLY ZERO.

Terminal Input Messages 2 - 11 Header Word 8

MSB														LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
R E P												HOP COUNT			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-3	REPROMULGATION RELAY HOP COUNT 0 = USE VALUE IN INITIALIZATION BLOCK 2 (SEE 30.4.3.2). 1-15 = DESIRED HOP COUNT

<u>BIT</u>	<u>DESIGNATION</u>
------------	--------------------

4-14	SPARE
------	-------

15	REPROMULGATION (REP) LOGIC 1 = REPROMULGATION RELAY REQUIRED LOGIC 0 = REPROMULGATION RELAY NOT REQUIRED
----	--

NOTE: WHEN THE "REP" BIT IS SET TO LOGIC 1 AND THE DPG IS INITIALIZED TO ORIGINATE MESSAGES FOR REPROMULGATION RELAY (SEE 30.4.3.2), THE DPG WILL FORMAT A REPROMULGATION RELAY TADIL J MESSAGE AS THE INITIAL WORD OF A TIME SLOT TRANSMISSION. THE HOST SHOULD SPECIFY A MAXIMUM OF 2, 5, OR 11 70-BIT WORDS (SEE HEADER WORD 3) DEPENDING ON THE SPECIFIED PACKING LIMIT (SEE HEADER WORD 2) OF STANDARD, PACKED-2, PACKED-4 RESPECTIVELY, or Terminal Messages 2-11.

TERMINAL INPUT MESSAGE 2-11

Terminal Input Messages 2 - 11 Header Word 9

MSB														LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
R / C				LOOPBACK ID											

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-11	HOST-ASSIGNED LOOPBACK ID
12-14	SPARE
15	RECEIPT/COMPLIANCE (R/C) LOGIC 0 = NO R/C REQUIRED LOGIC 1 = R/C REQUIRED

NOTE: THE ASSIGNMENT OF A NON-ZERO LOOPBACK ID NUMBER BY THE HOST WILL IDENTIFY TO THE IU THAT THE COMMON CARRIER MESSAGE REQUIRES SUBSEQUENT LOOPBACK STATUS INDICATION (SEE 80.1.4.7.1.7). THE HOST SHALL AVOID USING THE SAME LOOPBACK ID FOR TWO OR MORE MESSAGES FOR WHICH STATUS REPORTS ARE SIMULTANEOUSLY REQUIRED. THE INDICATION WILL BE PROVIDED WITHIN 100 MILLISECONDS AFTER A CHANGE IN STATUS OCCURS. LOOPBACK STATUS IS NOT REQUIRED IF THE LOOPBACK ID IS SET TO 0.

Terminal Input Messages 2 - 11 Header Word 10

MSB														LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	SOURCE TRACK NUMBER														

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-14	SOURCE TRACK NUMBER TO BE USED BY THE DPG IN THE TRANSMISSION OF THIS MESSAGE. RANGE: 00000 - 77777 (OCTAL) 0 = USE THE PRIMARY TRACK NUMBER (SEE 30.4.2.2).
15	SPARE

TERMINAL INPUT MESSAGE 2-11

80.1.4.8.1.2.2.3 Message Body. The message body will consist of 5-120 (16-bit) words. The first message body starts at word 12 of subaddress 2. Each later message body immediately follows the corresponding message header. In the table below, the ranges are a function of the Packing Limit: Standard (S), Packed-2 (P2) or Packed-4 (P4). For Repromulgation Relay, see the note at the end of Header Word 8.

MESSAGE BODY LENGTH (N)

	DATA TYPE		
	FIXED FORMAT	FREE TEXT UNCODED	FREE TEXT CODED
ALLOWABLE NUMBER OF MESSAGE WORDS	1 - 3 (S)	1 (S)	1 (S)
	1 - 6 (P2)	1 - 2 (P2)	1 - 2 (P2)
	1 - 12 (P4)	1 - 4 (P4)	1 - 4 (P4)
NUMBER OF (16-BIT) MUX WORDS PER MESSAGE WORD	5	30	15
ALLOWABLE NUMBER OF (16-BIT) MUX WORDS PER MESSAGE	5 - 15 (S)	30 (S)	15 (S)
	5 - 30 (P2)	30 - 60 (P2)	15 - 30 (P2)
	5 - 60 (P4)	30 - 120 (P4)	15 - 60 (P4)

The format of the message body for the three message types (see Header Word 2) is given below.

FIXED FORMAT: DATA TYPE = 2

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 1	15															0	
wd 2	31															16	
wd 3	47															32	
wd 4	63															48	
wd 5											69					64	

The above is the first TADIL J codeword (message word).

The next fixed format message word, if necessary, follows in words 6-10 and has the same format. This sequence is repeated up to a maximum of twelve message words.

NOTE: The message words (TADIL J Codewords) can define 1 to 12 TADIL J messages, the first of which may require receipt-compliance.

FREE TEXT UNCODED: DATA TYPE = 0

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 1	15															0	
wd 2	31															16	
wd 3	47															32	
:	:																
wd 28	447															432	
wd 29	463															448	
wd 30																464	

The above is the first message word.

The next uncoded free text message word (if necessary) follows in words 31-60. This sequence is repeated up to a maximum of four message words.

FREE TEXT CODED: DATA TYPE = 1

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 1	15															0	
wd 2	31															16	
wd 3	47															32	
:	:																
wd 13	207															192	
wd 14	223															208	
wd 15																224	

The above is the first message word.

The next coded free text message word (if necessary) follows in words 16 - 30. This sequence is repeated up to a maximum of four message words.

80.1.4.8.1.2.3 Status Word. See 80.1.4.8.1.1.3.

80.1.4.8.1.3 Message Format for Terminal Input Message 12. Not used by Navy.

TERMINAL INPUT MESSAGE 12 - TERMINAL INPUT MESSAGES 2-11

80.1.4.8.1.4 Message Format for Terminal Input Messages 13 and 14 - Target Sorting Messages. NAVY AIR ONLY.

80.1.4.8.1.4.1 Command Word. See 80.1.4.8.1.1.1.

80.1.4.8.1.4.2 Data Words. For both subaddresses, the word definitions and formats are given below.

<u>WORDS</u>	<u>PARAMETERS</u>
1	LOOPBACK ID
2	DATA AGE
3	HOST-DEFINED ID OF THE TARGET TRACK
4	MESSAGE LENGTH AND GROUP INDICATOR
5-24	TARGET SORTING MESSAGE

Subaddressed 13 and 14 will each contain data for one target sorting message.

Terminal Input Messages 13 and 14 Word 1

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
				LOOPBACK ID											

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-11	HOST-ASSIGNED LOOPBACK ID FOR THIS MESSAGE. - <u>NAVY AIR ONLY</u> SEE NOTE FOR HEADER WORD 9 IN 80.1.4.8.1.2.2.2.
12-15	SPARE

Terminal Input Messages 13 and 14 Word 2

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	DATA AGE														

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-14	DATA AGE - <u>NAVY AIR ONLY</u> SEE NOTE FOR HEADER WORD 1 IN 80.1.4.8.1.2.2.2. LSB: ONE SLOT = 0.0078125 SECONDS RANGE: 0 TO 32767 SLOTS.
15	SPARE

TERMINAL INPUT MESSAGE 13-14

Terminal Input Messages 13 and 14 Word 3

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
		TID													

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-13	HOST-DEFINED ID OF THE TARGET TRACK DESCRIBED IN THIS TARGET SORTING MESSAGE (TID) - <u>NAVY AIR ONLY</u>
14-15	SPARE

Terminal Input Messages 13 and 14 Word 4

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
											AB		MLI		

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-2	MESSAGE LENGTH INDICATOR (MLI) - <u>NAVY AIR ONLY</u> RANGE: 2 - 4 NUMBER OF TADIL J WORDS IN THE TARGET SORTING MESSAGE
3-4	GROUP INDICATOR (AB) - <u>NAVY AIR ONLY</u>
	BIT 4 • 3 • • • • • 0 • 0 NO STATEMENT 0 • 1 MESSAGE BELONGS TO GROUP A 1 • 0 MESSAGE BELONGS TO GROUP B 1 • 1 MESSAGE BELONGS TO BOTH GROUP A AND • GROUP B
5-15	SPARE

Terminal Input Messages 13 and 14 Words 5-24

MSB														LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
TARGET SORTING MESSAGE DATA															

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-15	TARGET SORTING MESSAGE DATA AS DEFINED BY JINTACCS JTIDS TIDP. THE FORMAT FOR THESE WORDS IS IDENTICAL TO THE ONE GIVEN FOR FIXED FORMAT MESSAGES IN 80.1.4.8.1.2.2.3. - <u>NAVY AIR ONLY</u>

80.1.4.8.1.4.3 Status Word. See 80.1.4.8.1.1.3.

80.1.4.8.1.5 Message Format for Terminal Input Message 15 - Air Platform and System Status Message. NAVY AIR ONLY.

80.1.4.8.1.5.1 Command Word. See 80.1.4.8.1.1.1.

80.1.4.8.1.5.2 Data Words. The data word definitions and formats are given below.

<u>WORD(S)</u>	<u>PARAMETERS</u>
1	LOOPBACK ID AND DATA STATUS
2	MESSAGE PRIORITY
3-17	AIR PLATFORM AND SYSTEM STATUS DATA

Terminal Input Messages 15 Word 1

MSB														LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
ST	LOOPBACK ID														

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-11	HOST-ASSIGNED LOOPBACK ID FOR THIS MESSAGE - <u>NAVY AIR ONLY</u> SEE NOTE FOR HEADER WORD 9 IN 80.1.4.8.1.2.2.2.
12-14	SPARE
15	STATUS (ST) - <u>NAVY AIR ONLY</u> LOGIC 0 = NO CHANGE TO THIS MESSAGE OTHER THAN FUEL QUANTITY FROM PREVIOUS TRANSMISSION LOGIC 1 = DATA CHANGED FROM PREVIOUS TRANSMISSION

TERMINAL INPUT MESSAGE 13-14

Terminal Input Messages 15 Word 2

MSB													LSB		
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
			PRIORITY												

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-12	PRIORITY - <u>NAVY AIR ONLY</u> SAME AS HEADER WORD 5 IN TIM's 2 - 11. SEE 80.1.4.8.1.2.2.2.
13-15	SPARE

Terminal Input Messages 15 Words 3-17

MSB													LSB		
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
AIR PLATFORM AND SYSTEM STATUS DATA															

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-15	AIR PLATFORM AND SYSTEM STATUS MESSAGE DATA AS DEFINED BY JINTACCS JTIDS TIDP. THE FORMAT FOR THESE WORDS IS IDENTICAL TO THE ONE GIVEN FOR FIXED FORMAT MESSAGES IN 80.1.4.8.1.2.2.3. - <u>NAVY AIR ONLY</u>

80.1.4.8.1.5.3 Status Word. See 80.1.4.8.1.1.3.

80.1.4.8.1.6 Message Format for Terminal Input Message 16 - Requests for Data, Control Inputs, R/C Responses, TSR Inputs and, for Navy Air, Advanced Slot Notification/Composite Blanking Specific Slots and Controls, and Net Selection Inputs.

80.1.4.8.1.6.1 Command Word. See 80.1.4.8.1.1.1.

80.1.4.8.1.6.2 Data Words. The data word definitions and formats are given below.

<u>WORDS</u>	<u>PARAMETERS</u>
1	REQUEST FOR DATA WORD #1
2	REQUEST FOR DATA WORD #2
3	CONTROL INPUTS #1
4	TIME OF DAY WORD #1
5	TIME OF DAY WORD #2, TIME UNCERTAINTY
6	RECEIPT/COMPLIANCE WORD #1
7	RECEIPT/COMPLIANCE WORD #2
8	CONTROL INPUTS #2
9	ASN/CB SPECIFIC SLOT WORD 1 - <u>NAVY AIR ONLY</u>
10	ASN/CB SPECIFIC SLOT WORD 2 - <u>NAVY AIR ONLY</u>
11	ASN/CB SPECIFIC SLOT WORD 3 - <u>NAVY AIR ONLY</u>
12	ASN/CB SPECIFIC SLOT WORD 4 - <u>NAVY AIR ONLY</u>
13	ASN/CB SPECIFIC SLOT WORD 5 - <u>NAVY AIR ONLY</u>
14	ASN/CB SPECIFIC SLOT WORD 6 - <u>NAVY AIR ONLY</u>
15	ASN/CB CONTROL - <u>NAVY AIR ONLY</u>
16	NET SELECTION INPUTS WORD #1 - <u>NAVY AIR ONLY</u>
17	NET SELECTION INPUTS WORD #2 - <u>NAVY AIR ONLY</u>
18	TSR OPERATE/SUSPEND BITS AND VALIDITY BITS
	FOR WORDS 19-26
19-26	POOL CAPACITY REQUESTS FOR TSR POOLS 0-7

80.1.4.8.1.6.2.1 Terminal Input Message 16 Word 1

REQUEST FOR DATA (CONTROL WORD)

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
		ATS		AE					RT		WC				

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-4	WORD COUNT (WC). THE NUMBER OF WORDS BEING REQUESTED (1-30). THIS FIELD IS USED ONLY IF ATS (BITS 12-13) IS SET TO "PHYSICAL". IF ATS IS SET TO "DATA WORD CODE", THIS FIELD IS A "DON'T CARE".
5-6	REQUEST TYPE (RT).
	BIT 6 • 5 ••••••• 0 • 0 NO STATEMENT - NO DATA IS BEING • REQUESTED 0 • 1 ADDRESS REQUEST - INDICATES A DATA • REQUEST USING A PHYSICAL ADDRESS 1 • 0 STATUS BLOCK REQUEST. STATUS BLOCKS • ARE DEFINED IN APPENDIX IV. 1 • 1 INITIALIZATION BLOCK REQUEST. • INITIALIZATION BLOCKS ARE DEFINED IN • APPENDIX III.
7	NOT USED
8-11	ADDRESS EXTENSION (AE) THE FOUR MSB'S OF MEMORY ADDRESS. USED ONLY WHEN ATS (BITS 12-13) IS SET TO "PHYSICAL"; IN THIS CASE THE SIXTEEN LSB'S OF THE MEMORY ADDRESS ARE IN WORD 2. IF ATS IS NOT SET TO "PHYSICAL", THIS FIELD IS A "DON'T CARE".

TERMINAL INPUT MESSAGE 16

<u>BIT</u>	<u>DESIGNATION</u>
12-13	ADDRESS TYPE SPECIFIER (ATS)
	BIT 13 • 12
	••••••••
	0 • 0 NOT USED
	0 • 1 PHYSICAL - MEMORY LOCATION IS
	• SPECIFIED BY A 20-BIT ABSOLUTE
	• MEMORY ADDRESS.
	1 • 0 DATA WORD CODE - AN INITIALIZATION
	• BLOCK OR STATUS BLOCK IS BEING
	• REQUESTED.
	1 • 1 NOT USED
14-15	NOT USED BY NAVY

80.1.4.8.1.6.2.2 Terminal Input Message 16 Word 2

Used when the Physical addressing method is chosen in Word 1.

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
ADDRESS															

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
------------	--------------------

0-15	THE 16 LSBS (THE MSB'S ARE IN THE "AE" FIELD OF WORD 1) OF THE PHYSICAL ADDRESS.
------	--

Terminal Input Message 16 Word 2

Used when the Data Word Code method is chosen in Word 1.

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
BI						SDW					DWC				

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
------------	--------------------

0-4	DATA WORD COUNT (DWC) THE NUMBER OF CONTIGUOUS DATA WORDS DESIRED, INCLUDING THE STARTING DATA WORD. RANGE: 1 - 30
5-9	STARTING DATA WORD (SDW) THE FIRST DESIRED DATA WORD WITHIN THE INITIALIZATION OR STATUS BLOCK. RANGE: 2 - 31 THIS VARIABLE USES THE DPG'S INTERNAL NUMBERING SYSTEM AS DESCRIBED IN 30.4.1.2.

NOTE: THAT THE SUM OF DWC AND SDW MUST BE # 32

10-15	BLOCK ID (BI) THE DESIRED STATUS OR INITIALIZATION BLOCK. RANGE: 0 - 63
-------	---

80.1.4.8.1.6.2.3 Terminal Input Message 16 Word 3

CONTROL INPUTS WORD 1

MSB													LSB		
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
B8	B7	B6	B5	B4	B3	B2	DS	I P F R	E I	F L	N E	N T R	P R		

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-1	SPARE
2	POSITION REFERENCE (PR) LOGIC 0 = DISABLE LOGIC 1 = ENABLE
3	NET TIME REFERENCE (NTR) LOGIC 0 = DISABLE LOGIC 1 = ENABLE
4	INITIATE NET ENTRY (NE)H LOGIC 0 = DISABLE LOGIC 1 = ENABLE
5	FLIGHT LEADER (FL) - <u>NAVY AIR ONLY</u> LOGIC 0 = DISABLE LOGIC 1 = ENABLE
6	EXERCISE INDICATOR (EI) LOGIC 0 = DISABLE LOGIC 1 = ENABLE
7	IPF RESET (IPFR)I LOGIC 0 = DISABLE LOGIC 1 = ENABLE

H IF THE TERMINAL IS IN COARSE OR FINE SYNC, THE IU MAPS THIS VARIABLE INTO THE "NET ENTRY RESET" BIT (SEE 80.1.2.21.4); OTHERWISE THE IU MAPS THE VARIABLE INTO THE "START NET ENTRY" BIT (SEE 80.1.2.21.1).

I FOR NAVY AIR ONLY, THE INPUT PRIORITY BIT (30.4.2.3) IS RELEVANT TO THIS VARIABLE.

TERMINAL INPUT MESSAGE 16

<u>BIT</u>	<u>DESIGNATION</u>
8	DATA SILENT (DS)HH LOGIC 0 = DISABLE LOGIC 1 = ENABLE
9	BIT 2 VALIDITY (B2) LOGIC 1 = SETTING IN BIT 2 IS VALID
10	BIT 3 VALIDITY (B3) LOGIC 1 = SETTING IN BIT 3 IS VALID
11	BIT 4 VALIDITY (B4) LOGIC 1 = SETTING IN BIT 4 IS VALID
12	BIT 5 VALIDITY (B5) - <u>NAVY AIR ONLY</u> LOGIC 1 = SETTING IN BIT 5 IS VALID
13	BIT 6 VALIDITY (B6) LOGIC 1 = SETTING IN BIT 6 IS VALID
14	BIT 7 VALIDITY (B7) LOGIC 1 = SETTING IN BIT 7 IS VALID
15	BIT 8 VALIDITY (B8) LOGIC 1 = SETTING IN BIT 8 IS VALID

HH FOR NAVY AIR ONLY, THE IU WILL RESPOND TO THIS VARIABLE ONLY IF THE JTIDS MODE DISCRETE IS 'SELECTED VIA MUX' (BITS 3, 4 AND 5 OF INPUT DISCRETE WORD 4, 90.1.1.4.1.4, ARE ALL 0).

80.1.4.8.1.6.2.4 Terminal Input Message 16 Word 4

TIME OF DAY WORD 1

MSB											LSB				
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
					TIME OF DAY (HOURS)					TIME OF DAY (MINUTES)					

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-5	TIME OF DAY (MINUTES) LSB: 1 MINUTE RANGE: 0-59
6-10	TIME OF DAY (HOURS) LSB: 1 HOUR RANGE: 0-23
11-15	SPARE

80.1.4.8.1.6.2.5 Terminal Input Message 16 Word 5

TIME OF DAY WORD 2

MSB																LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0		
TV		TIME UNCERTAINTY (SECONDS)				TIME UNCERTAINTY (MINUTES)				TIME OF DAY (SECONDS)							

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-5	TIME OF DAY (SECONDS) LSB: 1 SECOND RANGE: 0-59
6-9	TIME UNCERTAINTY (MINUTES) LSB: 1 MINUTE RANGE: 0-15
10-13	TIME UNCERTAINTY (SECONDS) LSB: 6 SECONDS RANGE: 0-54

TERMINAL INPUT MESSAGE 16

<u>BIT</u>	<u>DESIGNATION</u>
14	SPARE
15	TIME OF DAY VALIDITY (TV) LOGIC 0 = INVALID LOGIC 1 = VALID

SEE NOTES FOR TIME OF DAY ERROR IN INITIALIZATION BLOCK 63 (PARAGRAPH 30.4.23.5).

80.1.4.8.1.6.2.6 Terminal Input Message 16 Word 6

R/C WORD 1

MSB											LSB				
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
											R/C RESPONSE				

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-4	RECEIPT/COMPLIANCE RESPONSE RANGE: 0-31 0 = NO STATEMENT THE OTHER VALUES ARE DESCRIBED IN TIDP-TE, VOL. II, PARAGRAPH 1.1.7.
5-15	SPARE

TERMINAL INPUT MESSAGE 16

80.1.4.8.1.6.2.7 Terminal Input Message 16 Word 7

R/C WORD 2

MSB											LSB				
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
0	0	0	1								RECEIPT/ COMPLIANCE ID NUMBER				

The bit designation shall be as follows:

BIT DESIGNATION

0-4 RECEIPT/COMPLIANCE ID NUMBER
THIS NUMBER WAS DEFINED BY THE SICP WHEN THE ORIGINAL
MESSAGE WAS SENT TO THE HOST. SEE HEADER WORD 5 IN
80.1.4.8.2.2.2.

5-11 NOT USED

12-15 TERMINAL ID SET TO 1. OTHER VALUES RESERVED FOR SICP USE.

NOTE: A VALUE OF ZERO FOR RECEIPT/COMPLIANCE ID NUMBER = NO STATEMENT

80.1.4.8.1.6.2.8 Terminal Input Message 16 Word 8

CONTROL INPUTS WORD 2

MSB											LSB				
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
		B 6 8	B 5	B 4	B 2 3	B 0 1	NAV				L T T I	B I T	XMIT ANT		RCV ANT

The bit designation shall be as follows:

BIT DESIGNATION

0-1 RECEIVE ANTENNA CONFIGURATION (RCV ANT)

BIT 1 • 0
 • • • • •

0 • 0 DUAL ANTENNA
0 • 1 ANTENNA A (RECEIVE ONLY, SHIP ONLY)
1 • 0 ANTENNA B (TRANSMIT/RECEIVE, SHIP
 • ONLY)
1 • 1 NOT USED BY NAVY

TERMINAL INPUT MESSAGE 16

<u>BIT</u>	<u>DESIGNATION</u>
2-3	TRANSMIT ANTENNA (XMIT ANTENNA) - <u>NAVY AIR ONLY</u>
	BIT 3 • 2 • • • • • 0 • 0 DUAL ANTENNA 0 • 1 ANTENNA A 1 • 0 ANTENNA B 1 • 1 NOT USED BY NAVY
4	BIT COMMAND (BIT)H LOGIC 1 = ENABLE WRA BIT LOGIC 0 = DISABLE WRA BIT
5	LONG TERM TRANSMIT INHIBIT (LTTI) I LOGIC 1 = ENABLE LTTI LOGIC 0 = DISABLE LTTI
6-8	ORGANIZATIONAL USER TYPE (NAV)
	BIT 8 • 7 • 6 • • • • • 0 • 0 • 1 SECONDARY USER 0 • 1 • 0 PRIMARY USER 1 • 0 • 0 NAV CONTROLLER 1 • 0 • 1 SECONDARY NAV CONTROLLER
9	BIT 0-1 VALIDITY (B01) LOGIC 1 = BIT 0-1 SETTING IS VALID
10	BIT 2 - 3 VALIDITY (B23) - <u>NAVY AIR ONLY</u> LOGIC 1 = BIT 2 - 3 SETTING IS VALID
11	BIT 4 VALIDITY (B4) LOGIC 1 = BIT 4 SETTING IS VALID
12	BIT 5 VALIDITY (B5) LOGIC 1 = BIT 5 SETTING IS VALID
13	BIT 6-8 VALIDITY (B68) LOGIC 1 = BIT 6-8 SETTING IS VALID
14-15	SPARE
H	A REQUEST FOR WRA BIT WILL BE IGNORED IF THE TERMINAL IS IN THE "PLATFORM IDENTIFIER REQUESTED" INITIALIZATION STATE. FOR THE <u>NAVY AIR</u> IU ONLY, THE INPUT PRIORITY BIT (30.4.2.3) IS RELEVANT TO THIS VARIABLE.
I	THE <u>NAVY AIR</u> IU WILL ALWAYS RESPOND TO THE LAST INPUT (VIA DISCRETE OR MUX) OF THIS VARIABLE.

80.1.4.8.1.6.2.9 Terminal Input Message 16 Words 9-14

SPECIFIC SLOTS IN ASN/CB - NAVY AIR ONLY

EACH SPECIFIC SLOT WILL HAVE THE SAME FORMAT AS THE SPECIFIC SLOT/SET IN A COMMON CARRIER MESSAGE. SEE MESSAGE HEADER WORD 7 FOR TIM'S 2-11, SEE 80.1.4.8.1.2.2.2.

80.1.4.8.1.6.2.10 Terminal Input Message 16 Word 15

NAVY AIR ONLY

MSB													LSB		
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
V A L													C B	C B L L	A S N

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	ADVANCED SLOT NOTIFICATION (ASN) - <u>NAVY AIR ONLY</u> LOGIC 1 = ENABLE LOGIC 0 = DISABLE
1	COMPOSITE BLANKING LOGIC LEVEL (CBLL) - <u>NAVY AIR ONLY</u> LOGIC 0 = TRUE LOGIC 1 = INVERTED
2	COMPOSITE BLANKING (CB) - <u>NAVY AIR ONLY</u> LOGIC 1 = ENABLE LOGIC 0 = DISABLE
3-14	SPARE
15	VALIDITY (VAL)H - <u>NAVY AIR ONLY</u> LOGIC 1 = VALID LOGIC 0 = INVALID

H WHEN THIS BIT IS SET TO "VALID", THE IU WILL ASSUME BITS 0-2 ARE ALL VALID. IF THIS BIT IS SET TO "INVALID", THE IU WILL IGNORE BITS 0-2.

TERMINAL INPUT MESSAGE 16

80.1.4.8.1.6.2.11 Terminal Input Message 16 Words 16-17

NET SELECTION NPG NUMBER, NET NUMBER AND REQUEST VALIDITY.
WORD 16

<u>NAVY AIR ONLY</u>																	
MSB																LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0		
V A L							RNPG										

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-8	REQUESTED NET PARTICIPATION GROUP (RNPG) - <u>NAVY AIR ONLY</u> 0 = CHANGE DEFAULT NET (SEE 80.1.2.15) 1-511 = CHANGE NET ON THE GIVEN NPG (SEE NOTES IN 80.1.2.15.2 FOR A GENERAL DESCRIPTION OF NET SELECTION)
9-14	SPARE
15	VALIDITY (VAL) - <u>NAVY AIR ONLY</u> LOGIC 1 = DATA IN THIS WORD AND NEXT WORD IS VALID LOGIC 0 = DATA IN THIS WORD AND NEXT WORD IS NOT VALID

WORD 17

<u>NAVY AIR ONLY</u>															
MSB							LSB								
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
									RNET						

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-6	REQUESTED NET (RNET) - <u>NAVY AIR ONLY</u> FOR ALL SLOT ASSIGNMENT BLOCKS ON RNPG, THE SICP IS REQUESTED TO CHANGE THE NETS TO THE SPECIFIED RNET.
7-15	SPARE

NOTE: WORD 17 IS VALID/INVALID AS PER BIT 15 IN WORD 16.

TERMINAL INPUT MESSAGE 16

80.1.4.8.1.6.2.12 Terminal Input Message 16 Word 18

TSR Operate/Suspend and Validity Word

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
V	V	V	V	V	V	V	V	O	O	O	O	O	O	O	O
7	6	5	4	3	2	1	0	S	S	S	S	S	S	S	S
								7	6	5	4	3	2	1	0

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	OPERATE/SUSPEND FOR TSR POOL (OS0) •
1	OPERATE/SUSPEND FOR TSR POOL (OS1) • LOGIC 0 =
2	OPERATE/SUSPEND FOR TSR POOL (OS2) • SUSPEND
3	OPERATE/SUSPEND FOR TSR POOL (OS3) •
4	OPERATE/SUSPEND FOR TSR POOL (OS4) •
5	OPERATE/SUSPEND FOR TSR POOL (OS5) • LOGIC 1 =
6	OPERATE/SUSPEND FOR TSR POOL (OS6) • OPERATE
7	OPERATE/SUSPEND FOR TSR POOL (OS7) •

NOTES: (1) ONLY ONE TSR POOL IS ALLOWED TO OPERATE AT A TIME.

(2) IF THE HOST WANTS TO CHANGE TSR OPERATION FROM ONE POOL TO ANOTHER, THE HOST MUST INPUT TWO CHANGES: ONE TO SUSPEND THE FIRST POOL AND THE OTHER TO OPERATE ON THE SECOND POOL.

8	VALIDITY OF WORD 19 •
9	VALIDITY OF WORD 20 •
10	VALIDITY OF WORD 21 • LOGIC 0 = NOT VALID
11	VALIDITY OF WORD 22 •
12	VALIDITY OF WORD 23 •
13	VALIDITY OF WORD 24 • LOGIC 1 = VALID
14	VALIDITY OF WORD 25 •
15	VALIDITY OF WORD 26 •

80.1.4.8.1.6.2.13 Terminal Input Message 16 Word 19

Demand for Pool 0

MSB											LSB				
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
NUMBER OF MESSAGES											AVERAGE NUMBER OF WORDS PER MESSAGE				

The bit designation shall be as follows:

BIT DESIGNATION

- 0-4 CODED VALUE FOR THE AVERAGE NUMBER OF WORDS PER MESSAGE. THE PREDICTED AVERAGE NUMBER OF TADIL J WORDS PER MESSAGE FOR TRANSMISSION DURING THE NEXT AND, UNTIL CHANGED BY THE HOST, SUBSEQUENT REALLOCATION PERIODS ON THE TSR POOL. THE CODED VALUE = $(N-1)*31/5$ WHERE N IS THE RAW VALUE (FOR THE AVERAGE NUMBER OF WORDS) OR, EQUIVALENTLY, $N = 1 + (\text{CODED VALUE}) * 5 / 31$.
RANGE: 0 - 31
- 5-15 NUMBER OF MESSAGES
THE PREDICTED NUMBER OF TADIL J MESSAGES TO BE TRANSMITTED DURING THE NEXT AND, UNTIL CHANGED BY THE HOST, SUBSEQUENT REALLOCATION PERIODS.
RANGE = 0 TO 2047

NOTE: 1) THE VALIDITY FOR THE DATA IN THIS WORD IS DETERMINED BY BIT 8 OF WORD 18.

2) THE VALUES FOR ANY TSR POOL MAY BE UPDATED BY THE HOST AT A RATE OF UP TO ONCE PER TWO SECONDS.

80.1.4.8.1.6.2.14 Terminal Input Message 16 Words 20 - 26

This data, for TSR POOLS 1-7, has format identical to that for TSR POOL 0, as given in word 19. The validity for these words is determined by the corresponding Bits 9-15 of Word 18.

80.1.4.8.1.6.3 Status word. See 80.1.4.8.1.1.3.

TERMINAL INPUT MESSAGE 16

80.1.4.8.1.7 Message Format for Terminal Input Message 17 - Host Navigation Data.

80.1.4.8.1.7.1 Command Word. See 80.1.4.8.1.1.1.

80.1.4.8.1.7.2 Data Words. The data word definitions and formats are given below.

<u>WORDS</u>	<u>PARAMETERS</u>
1	NAV SYSTEM IN USE, VALIDITY BITS AND FOR <u>NAVY SHIP ONLY</u> , DAMPING MODE
2	FIX QUALITY, UPDATE FLAG AND FOR <u>NAVY SHIP ONLY</u> , JTIDS USED
3-4	TIME OF UPDATE
5-6	PLATFORM LATITUDE
7-8	PLATFORM LONGITUDE
9-10	PLATFORM ALTITUDE - <u>NAVY AIR ONLY</u>
11-12	TIME OF COMPUTATION--ATTITUDE
13	PLATFORM ROLL
14	PLATFORM PITCH
15	PLATFORM HEADING
16-17	TIME OF COMPUTATION--VELOCITY
18-19	PLATFORM NORTH VELOCITY
20-21	PLATFORM EAST VELOCITY
22	PLATFORM VERTICAL VELOCITY - <u>NAVY AIR ONLY</u>
23	PLATFORM AZIMUTH WANDER ANGLE
24	NORTH VELOCITY CORRECTION USED
25	EAST VELOCITY CORRECTION USED
26	NORTH MISALIGNMENT CORRECTION USED
27	EAST MISALIGNMENT CORRECTION USED
28	AZIMUTH CORRECTION USED
29	WIND NORTH VELOCITY - <u>NAVY AIR ONLY</u>
29	OCEAN CURRENT NORTH VELOCITY - <u>NAVY SHIP ONLY</u>
30	WIND EAST VELOCITY - <u>NAVY AIR ONLY</u>
30	OCEAN CURRENT EAST VELOCITY - <u>NAVY SHIP ONLY</u>
31	REFERENCE NORTH VELOCITY - <u>NAVY SHIP ONLY</u>
32	REFERENCE EAST VELOCITY - <u>NAVY SHIP ONLY</u>

80.1.4.8.1.7.2.1 Terminal Input Message 17 Word 1

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
PS	AL	VL	HD	P A R	WA	V C	MC			DM		NAV SYSTEM IN USE			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-3	NAV SYSTEM IN USE
BIT	3 . 2 . 1 . 0

	0 . 0 . 0 . 0 OFF/FAIL/UNAVAILABLE
	0 . 0 . 0 . 1 ALIGN (INERTIAL NAVIGATION
	. . . SYSTEM)
	0 . 0 . 1 . 0 INERTIAL NAVIGATION SYSTEM
	. . . (INS) ONLY - <u>NAVY AIR ONLY</u>
	0 . 0 . 1 . 1 STANDARD ATTITUDE HEADING
	. . . REFERENCE SYSTEM (SAHRS)
	. . . <u>NAVY AIR ONLY</u>
	0 . 1 . 0 . 0 SPARE
	0 . 1 . 0 . 1 SPARE
	0 . 1 . 1 . 0 SPARE
	0 . 1 . 1 . 1 TRUE AIR SPEED (TAS)/
	. . . ATTITUDE HEADING REFERENCE
	. . . SYSTEM (AHRS) <u>NAVY AIR ONLY</u>
	0 . 1 . 1 . 1 EM LOG/GYRO - <u>NAVY SHIP ONLY</u>
	1 . 0 . 0 . 0 WSN-5 FORE - <u>NAVY SHIP ONLY</u>
	1 . 0 . 0 . 1 WSN-5 AFT - <u>NAVY SHIP ONLY</u>
	1 . 0 . 1 . 0 CVNS #1 - <u>NAVY SHIP ONLY</u>
	1 . 0 . 1 . 1 CVNS #2 - <u>NAVY SHIP ONLY</u>
4-5	DAMPING MODE (DM) - <u>NAVY SHIP ONLY</u>
BIT	5 . 4

	0 . 0 NO DAMPING
	0 . 1 FREE INERTIAL
	1 . 0 DAMPED MODE 1
	1 . 1 DAMPED MODE 2
6-7	SPARE
8-15	VALIDITY BITS
	LOGIC 1 = VALID
	LOGIC 0 = INVALID
8	MISALIGNMENT CORRECTIONS VALID (MC) (RESERVED FOR FUTURE GROWTH)
9	VELOCITY CORRECTIONS VALID (VC) (RESERVED FOR FUTURE GROWTH)
10	WANDER ANGLE VALID (WA)

<u>BIT</u>	<u>DESIGNATION</u>
11	PITCH AND ROLL VALID (PAR)
12	HEADING VALID (HD)
13	VELOCITY VALID (VL)
14	ALTITUDE VALID (AL) - <u>NAVY AIR ONLY</u>
15	GEODETTIC POSITION (LAT/LONG) VALID (PS) HORIZONTAL QUALITY MUST BE PROVIDED IN WORD 2

TERMINAL INPUT MESSAGE 17

80.1.4.8.1.7.2.2 Terminal Input Message 17 Word 2

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
UF							J	VERT FIX QUAL				HOR FIX QUAL HOR QUAL			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-3	HORIZONTAL POSITION FIX QUALITY (HOR FIX QUAL) 0 - 15 (SEE TABLE) - <u>NAVY AIR ONLY</u> HORIZONTAL POSITION QUALITY (HOR QUAL) - <u>NAVY SHIP ONLY</u> VALIDITY: PS BIT OF WORD 1

QUALITY LEVEL	POSITION UNCERTAINTYH (FEET)
15	#50
14	#71
13	#100
12	#141
11	#200
10	
9	#282
8	#400
7	#565
6	#800
5	#1130
4	
3	#1600
2	#2260
1	#4520
0	#9040
	#18080
	>18080 (NO STATEMENT)

H INCLUDES SEMI-MAJOR AXIS OF POSITION ERROR ELLIPSE OF NAV SYSTEM IN USE, TIME UNCERTAINTY OF UPDATE AND DISCREPANCY BETWEEN REFERENCE POINTS OF UPDATE AND NAV SYSTEM IN USE

4-7	VERTICAL POSITION FIX QUALITY (VERT FIX QUAL) - <u>NAVY AIR ONLY</u> 0 - 15 (SEE TABLE) VALIDITY: AL BIT OF WORD 1
-----	--

8	JTIDS USED (J) - <u>NAVY SHIP ONLY</u> LOGIC 0 = LAT/LONG WORDS ARE INDEPENDENT OF JTIDS POSITION LOGIC 1 = LAT/LONG WORDS ARE DERIVED FROM JTIDS POSITION
---	--

TERMINAL INPUT MESSAGE 17

<u>BIT</u>	<u>DESIGNATION</u>
9-14	SPARE
15	UPDATE FLAG (UF)
	<u>NAVY SHIP ONLY</u>
	LOGIC 1 = LAT/LONG WORDS CONTAIN GEODETIC POSITION FIX UPDATE INFORMATION FROM SHIP'S LATEST KALMAN FILTER CYCLE
	LOGIC 0 = LAT/LONG WORDS DO NOT CONTAIN GEODETIC POSITION FIX UPDATE INFORMATION FROM SHIP'S LATEST KALMAN FILTER CYCLE
	<u>NAVY AIR ONLY</u>
	LOGIC 1 = LAT/LONG/ALT WORDS CONTAIN GEODETIC UPDATE INFORMATION
	LOGIC 0 = LAT/LONG/ALT WORDS DO NOT CONTAIN GEODETIC UPDATE INFORMATION

80.1.4.8.1.7.2.3 Terminal Input Message 17 Words 3-4

<u>NAVY AIR ONLY</u>																
MSB								LSB								
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 3	TIME OF UPDATE (WORD 1)															
wd 4	TIME OF UPDATE (WORD 2)															

The bit designation shall be as follows:

WORDS 3 AND 4

DESCRIPTION: 32-BIT SCALED BINARY
MSB: APPROXIMATELY 68,719.5
LSB: $32 \times 10^{**}(-6)$
UNITS: SECONDS
RANGE: 0 TO APPROXIMATELY 137,439
VALIDITY: VALID ONLY IF UPDATE FLAG (WORD 2) IS SET TO
LOGIC 1, AND OFFSET VALIDITY (OV) BIT OF
INITIALIZATION BLOCK 56, WORD 17 IS SET TO
LOGI1C 0.

NOTE: DEFINES TIME WHEN GEODETIC FIX UPDATE WAS GENERATED AND
ACCEPTED BY THE NAVIGATION SYSTEM.

TERMINAL INPUT MESSAGE 17

NAVY SHIP ONLY

MSB												LSB				
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 3	TIME OF UPDATE															
wd 4													SLOT DIVIDER			

The bit designation shall be as follows:

WORD 3

<u>BIT</u>	<u>DESIGNATION</u>
0-15	TIME TAG (IN SLOTS) RANGE: 0 - 65535 VALIDITY: VALID ONLY IF UPDATE FLAG (WORD 2) IS SET TO 1 AND OFFSET VALIDITY (OV) BIT OF INITIALIZATION BLOCK 56, WORD 17 IS SET TO 0.

NOTE: DEFINES TIME WHEN GEODETIC FIX UPDATE WAS GENERATED AND
ACCEPTED BY THE NAVIGATION SYSTEM. SEE WORDS 5-7 OF TOM 1 FOR
SYNCHRONIZATION OF THIS TIME TAG WITH "TIME OF DAY".

WORD 4

<u>BIT</u>	<u>DESIGNATION</u>
0-3	SLOT DIVIDER MSB: 7.8125/2 (1/2 SLOT) LSB: 7.8125/16 (1/16 SLOT) UNITS: MILLISECONDS RANGE: 0 TO 7.8125-LSB (0 TO 1 SLOT-LSB) VALIDITY: SAME AS WORD 3

NOTE: GIVES INTRASLOT TIME IN WHICH INPUT DATA IS VALID

4-15	SPARE
------	-------

80.1.4.8.1.7.2.4 Terminal Input Message 17 Words 5-6

MSB												LSB				
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 5	PLATFORM LATITUDE (WORD 1)															
wd 6	PLATFORM LATITUDE (WORD 2)															

The bit designation shall be as follows:

DESCRIPTION: 32-BIT BAM (SEE TABLE IV-III)
MSB: -180
LSB: $180 \times 2^{**}(-31)$
UNITS: DEGREES
RANGE: \forall 90
VALIDITY: SPECIFIED BY PS BIT OF WORD 1
GREATER THAN +90 OR LESS THAN -90 ARE INVALID INPUTS
NOTE: SOUTH IS NEGATIVE

TERMINAL INPUT MESSAGE 17

80.1.4.8.1.7.2.5 Terminal Input Message 17 Words 7-8

MSB												LSB				
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 7	PLATFORM LONGITUDE (WORD 1)															
wd 8	PLATFORM LONGITUDE (WORD 2)															

The bit designation shall be as follows:

DESCRIPTION: 32-BIT BAM (SEE TABLE IV-III)

MSB: -180

LSB: $180 \times 2^{**}(-31)$

UNITS: DEGREES

RANGE: -180 TO +180-LSB

VALIDITY: SPECIFIED BY PS BIT OF WORD 1

NOTE: WEST IS NEGATIVE

80.1.4.8.1.7.2.6 Terminal Input Message 17 Words 9-10

NAVY AIR ONLY																	
MSB																LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 9	PLATFORM ALTITUDE (WORD 1)																
wd 10	PLATFORM ALTITUDE (WORD 2)																

The bit designation shall be as follows:

DESCRIPTION: 32-BIT TWO'S COMPLEMENT

MSB: -131,072

LSB: $2^{**}(-14)$

UNITS: FEET

RANGE: -131,072 TO +131,072 -LSB

VALIDITY: SPECIFIED BY AL BIT OF WORD 1

NOTE: UP IS POSITIVE

80.1.4.8.1.7.2.7 Terminal Input Message 17 Words 11-12

NAVY AIR ONLY																
MSB								LSB								
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 11	TIME OF COMPUTATION -- ATTITUDE (WORD 1)															
wd 12	TIME OF COMPUTATION -- ATTITUDE (WORD 2)															

The bit designation shall be as follows:

FORMAT IS SAME AS TIME OF UPDATE (WORDS 3-4)

VALIDITY: VALID ONLY IF PAR OR HD BIT (WORD 1) IS SET TO VALID, AND OFFSET VALIDITY (OV) BIT OF INITIALIZATION BLOCK 56, WORD 17 IS SET TO 0.

NOTE: DEFINES THE TIME WHEN THE PLATFORM ROLL, PLATFORM PITCH AND PLATFORM TRUE HEADING ARE VALID AS COMPUTED IN THE HOST PLATFORM

<u>NAVY SHIP ONLY</u>																
MSB											LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 11	TIME OF COMPUTATION -- ATTITUDE															
wd 12													SLOT DIVIDER			

The bit designation shall be as follows:

FORMAT IS SAME AS TIME OF UPDATE AND SLOT DIVIDER (WORDS 3-4)

VALIDITY: VALID ONLY IF PAR OR HD BIT (WORD 1) IS SET TO VALID, AND OFFSET VALIDITY (OV) BIT OF INITIALIZATION BLOCK 56, WORD 17 IS SET TO 0.

NOTE: DEFINES THE TIME WHEN THE PLATFORM ROLL, PLATFORM PITCH AND PLATFORM HEADING ARE VALID AS COMPUTED IN THE HOST PLATFORM.

80.1.4.8.1.7.2.8 Terminal Input Message 17 Word 13

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
PLATFORM ROLL															

The bit designation shall be as follows:

DESCRIPTION: 16-BIT BAM (SEE TABLE IV-III)
MSB: -180
LSB: $180 \times 2^{**}(-15)$
UNITS: DEGREES
RANGE: -180 TO +180-LSB
VALIDITY: SPECIFIED BY PAR BIT OF WORD 1

NOTE: POSITIVE WITH RIGHT WING DOWN - NAVY AIR ONLY
POSITIVE WITH STARBOARD UP - NAVY SHIP ONLY

TERMINAL INPUT MESSAGE 17

80.1.4.8.1.7.2.9 Terminal Input Message 17 Word 14

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
PLATFORM PITCH															

The bit designation shall be as follows:

DESCRIPTION: 16-BIT BAM (SEE TABLE IV-III)
 MSB: -180
 LSB: $180 \times 2^{**}(-15)$
 UNITS: DEGREES
 RANGE: -180 TO +180-LSB
 VALIDITY: SPECIFIED BY PAR BIT OF WORD 1
 NOTE: POSITIVE WITH NOSE UP - NAVY AIR ONLY
 POSITIVE WITH BOW DOWN - NAVY SHIP ONLY

80.1.4.8.1.7.2.10 Terminal Input Message 17 Word 15

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
PLATFORM HEADING															

The bit designation shall be as follows:

DESCRIPTION: 16-BIT BAM (SEE TABLE IV-III)
 MSB: -180
 LSB: $180 \times 2^{**}(-15)$
 UNITS: DEGREES
 RANGE: -180 TO +180-LSB
 VALIDITY: SPECIFIED BY HD BIT OF WORD 1
 NOTE: POSITIVE IS CLOCKWISE. TRUE NORTH = 0.

80.1.4.8.1.7.2.11 Terminal Input Message 17 Words 16-17

NAVY AIR ONLY

MSB											LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 16	TIME OF COMPUTATION -- VELOCITY (WORD 1)															
wd 17	TIME OF COMPUTATION -- VELOCITY (WORD 2)															

The bit designation shall be as follows:

FORMAT IS SAME AS TIME OF UPDATE (WORDS 3-4)

VALIDITY: VALID ONLY IF VL BIT (WORD 1) IS SET TO VALID AND
 OFFSET VALIDITY (OV) BIT OF INITIALIZATION BLOCK 56, WORD 17 IS
 SET TO 0.

TERMINAL INPUT MESSAGE 17

NOTE: DEFINES THE TIME WHEN THE PLATFORM NORTH VELOCITY, PLATFORM EAST VELOCITY, AND PLATFORM VERTICAL VELOCITY, ARE VALID AS COMPUTED IN THE HOST PLATFORM.

NAVY SHIP ONLY

MSB												LSB				
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 16	TIME OF COMPUTATION -- VELOCITY															
wd 17													SLOT DIVIDER			

The bit designation shall be as follows:

FORMAT IS SAME AS TIME OF UPDATE AND SLOT DIVIDER (WORDS 3-4)

VALIDITY: VALID ONLY IF VL BIT (WORD 1) IS SET TO VALID AND OFFSET VALIDITY (OV) BIT OF INITIALIZATION BLOCK 56, WORD 17 IS SET TO 0.

NOTE: DEFINES THE TIME WHEN THE PLATFORM NORTH VELOCITY AND PLATFORM EAST VELOCITY ARE VALID AS COMPUTED IN THE HOST PLATFORM.

80.1.4.8.1.7.2.12 Terminal Input Message 17 Words 18-19

MSB												LSB				
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 18	PLATFORM NORTH VELOCITY (WORD 1)															
wd 19	PLATFORM NORTH VELOCITY (WORD 2)															

The bit designation shall be as follows:

DESCRIPTION: 32-BIT TWO'S COMPLEMENT
 MSB: -4096
 LSB: $2^{**}(-19)$
 UNITS: FEET/SEC
 RANGE: -4096 TO +4096-LSB
 VALIDITY: SPECIFIED BY VL BIT OF WORD 1
 NOTE: SOUTH IS NEGATIVE

TERMINAL INPUT MESSAGE 17

80.1.4.8.1.7.2.13 Terminal Input Message 17 Words 20-21

MSB												LSB				
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 20	PLATFORM EAST VELOCITY (WORD 1)															
wd 21	PLATFORM EAST VELOCITY (WORD 2)															

The bit designation shall be as follows:

FORMAT AND VALIDITY ARE SAME AS PLATFORM NORTH VELOCITY (WORDS 18-19)

NOTE: WEST IS NEGATIVE

80.1.4.8.1.7.2.14 Terminal Input Message 17 Word 22

<u>NAVY AIR ONLY</u>															
MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
PLATFORM VERTICAL VELOCITY															

The bit designation shall be as follows:

NAVY AIR ONLY

DESIGNATION: 16-BIT TWO'S COMPLEMENT

MSB: -4096

LSB: $2^{**}(-3)$

UNITS: FEET/SEC

RANGE: -4096 TO +4096 - LSB

VALIDITY: SAME AS PLATFORM NORTH VELOCITY (WORDS 18 - 19). 0

IS NO STATEMENT VALUE

NOTE: DOWN IS NEGATIVE

TERMINAL INPUT MESSAGE 17

80.1.4.8.1.7.2.15 Terminal Input Message 17 Word 23

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
PLATFORM AZIMUTH WANDER ANGLE															

The bit designation shall be as follows:

DESCRIPTION: 16-BIT BAM (SEE TABLE IV-III)

MSB: -180

LSB: $180 \times 2^{**}(-15)$

UNITS: DEGREES

RANGE: -180 TO +180-LSB

VALIDITY: VALID ONLY IF NAV SYSTEM IN USE (WORD 1) IS 2 (INS ONLY) OR 3 (SAHRS) FOR NAVY AIR 8 OR 9 (WSN-5) FOR NAVY SHIP AND WA BIT (WORD 1) IS SET TO VALID.

NOTE: DEFINES ORIENTATION OF PLATFORM SENSING AXES WITH RESPECT TO TRUE NORTH IN NON NORTH-SLAVED SYSTEMS. POSITIVE IS COUNTERCLOCKWISE. TRUE NORTH = 0.

80.1.4.8.1.7.2.16 Terminal Input Message 17 Word 24

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
NORTH VELOCITY CORRECTION USED															

The bit designation shall be as follows:

DESCRIPTION: 16-BIT TWO'S COMPLEMENT

MSB: -256

LSB: $2^{**}(-7)$

UNITS: FEET/SEC

RANGE: -256 TO +256-LSB

VALIDITY: VALID ONLY IF NAV SYSTEM IN USE (WORD 1) IS 2 (INS ONLY) OR 3 (SAHRS) FOR NAVY AIR 8, 9 (WSN-5), 10 OR 11 (CVNS) FOR NAVY SHIP , AND VC BIT (WORD 1) IS SET TO VALID.

NOTE: RESERVED FOR FUTURE GROWTH; PRESENT NAVY SHIPBOARD AND AIRBORNE NAV SYSTEMS DO NOT PROVIDE VELOCITY CORRECTIONS.

TERMINAL INPUT MESSAGE 17

80.1.4.8.1.7.2.17 Terminal Input Message 17 Word 25

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
EAST VELOCITY CORRECTION USED															

The bit designation shall be as follows:

FORMAT, VALIDITY, AND NOTE ARE SAME AS NORTH VELOCITY CORRECTION USED (WORD 24)

80.1.4.8.1.7.2.18 Terminal Input Message 17 Word 26

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
NORTH MISALIGNMENT CORRECTION USED															

The bit designation shall be as follows:

DESCRIPTION: 16-BIT SCALED BINARY

MSB: $-180 \times 2^{(-6)}$

LSB: $180 \times 2^{(-21)}$

UNITS: DEGREES

RANGE: $-180 \times 2^{(-6)}$ TO $+180 \times 2^{(-6)}$ -LSB

VALIDITY: VALID ONLY IF NAV SYSTEM IN USE (WORD 1) IS 2 (INS ONLY) OR 3 (SAHRS) FOR NAVY AIR 8, 9 (WSN-5), 10 OR 11 (CVNS) FOR NAVY SHIP, AND MC BIT (WORD 1) IS SET TO VALID.

NOTE: RESERVED FOR FUTURE GROWTH; PRESENT NAVY SHIPBOARD AND AIRBORNE NAV SYSTEMS DO NOT PROVIDE MISALIGNMENT CORRECTIONS.

80.1.4.8.1.7.2.19 Terminal Input Message 17 Word 27

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
EAST MISALIGNMENT CORRECTION USED															

The bit designation shall be as follows:

FORMAT, VALIDITY, AND NOTE ARE SAME AS NORTH MISALIGNMENT CORRECTION USED (WORD 26)

TERMINAL INPUT MESSAGE 17

80.1.4.8.1.7.2.20 Terminal Input Message 17 Word 28

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
AZIMUTH CORRECTION USED															

The bit designation shall be as follows:

FORMAT AND VALIDITY ARE SAME AS NORTH MISALIGNMENT CORRECTION
USED (WORD 26)

80.1.4.8.1.7.2.21 Terminal Input Message 17 Word 29

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
WIND NORTH VELOCITY - <u>NAVY AIR ONLY</u> OCEAN CURRENT NORTH VELOCITY - <u>NAVY SHIP ONLY</u>															

The bit designation shall be as follows:

DESCRIPTION: 16-BIT TWO'S COMPLEMENT
MSB: -1024
LSB: $2^{**}(-5)$
UNITS: FEET/SEC
RANGE: -1024 TO +1024-LSB
VALIDITY: 0 FEET/SEC IS NO STATEMENT VALUE
NOTE: SOUTH IS NEGATIVE

80.1.4.8.1.7.2.22 Terminal Input Message 17 Word 30

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
WIND EAST VELOCITY - <u>NAVY AIR ONLY</u> OCEAN CURRENT EAST VELOCITY - <u>NAVY SHIP ONLY</u>															

The bit designation shall be as follows:

FORMAT AND VALIDITY ARE SAME AS (WIND/OCEAN CURRENT) NORTH
VELOCITY (WORD 29)
NOTE: WEST IS NEGATIVE

TERMINAL INPUT MESSAGE 17

80.1.4.8.1.7.2.23 Terminal Input Message 17 Word 31

<u>NAVY SHIP ONLY</u>															
MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
REFERENCE NORTH VELOCITY - <u>NAVY SHIP ONLY</u>															

The bit designation shall be as follows:

DESCRIPTION: 16-BIT TWO'S COMPLEMENT
MSB: -4096
LSB: $2^{**}(-3)$
UNITS: FEET/SEC
RANGE: -4096 TO +4096-LSB
VALIDITY: VALID ONLY IF DAMPED MODE (WORD 1, BITS 4-5) IS 1, 2, OR 3
NOTE: SOUTH IS NEGATIVE

80.1.4.8.1.7.2.24 Terminal Input Message 17 Word 32

<u>NAVY SHIP ONLY</u>															
MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
REFERENCE EAST VELOCITY - <u>NAVY SHIP ONLY</u>															

The bit designation shall be as follows:

FORMAT AND VALIDITY ARE SAME AS REFERENCE NORTH VELOCITY (WORD 31)
NOTE: WEST IS NEGATIVE

80.1.4.8.1.7.3 Status Word. See 80.1.4.8.1.1.3.

80.1.4.8.1.8 Message Format for Terminal Input Message 18 - External Time Reference (ETR) Data.

80.1.4.8.1.8.1 Command Word. See 80.1.4.8.1.1.1.

80.1.4.8.1.8.2 Data Words. The data word definitions and formats are given below.

<u>WORDS</u>	<u>PARAMETERS</u>
1	HOUR, MINUTE
2	SECOND, DAY
3	DAY
4	TIME FIGURE OF MERIT

80.1.4.8.1.8.2.1 Terminal Input Message 18 Word 1

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
HOURS - 1ST DIGIT				HOURS - 2ND DIGIT				MINUTES - 1ST DIGIT				MINUTES - 2ND DIGIT			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-3	MINUTES - 2ND DIGIT MSB: 8 LSB: 1 UNITS: MINUTES VALID RANGE: 0 TO 9
4-7	MINUTES - 1ST DIGIT MSB: 80 LSB: 10 UNITS: MINUTES VALID RANGE: 0 TO 50
8-11	HOURS - 2ND DIGIT MSB: 8 LSB: 1 UNITS: HOURS VALID RANGE: 0 TO 9
12-15	HOURS - 1ST DIGIT MSB: 80 LSB: 10 UNITS: HOURS VALID RANGE: 0 TO 20 NOTE: CUMULATIVE RANGE IS 0 - 23

TERMINAL INPUT MESSAGE 18

80.1.4.8.1.8.2.2 Terminal Input Message 18 Word 2

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
SECONDS - 1ST DIGIT				SECONDS - 2ND DIGIT				DAY OF YEAR - 1ST DIGIT				DAY OF YEAR - 2ND DIGIT			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-3	DAY OF YEAR - 2ND DIGIT MSB: 80 LSB: 10 UNITS: DAYS VALID RANGE: 0 TO 90
4-7	DAY OF YEAR - 1ST DIGIT MSB: 800 LSB: 100 UNITS: DAYS VALID RANGE: 0 TO 300
8-11	SECONDS - 2ND DIGIT MSB: 8 LSB: 1 UNITS: SECONDS VALID RANGE: 0 TO 9
12-15	SECONDS - 1ST DIGIT MSB: 80 LSB: 10 UNITS: SECONDS VALID RANGE: 0 TO 50

TERMINAL INPUT MESSAGE 18

80.1.4.8.1.8.2.3 Terminal Input Message 18 Word 3

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
DAY OF YEAR - 3RD DIGIT															

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-11	NOT USED BY NAVY
12-15	DAY OF YEAR - 3RD DIGIT MSB: 8 LSB: 1 UNITS: DAYS VALID RANGE: 0 TO 9

NOTE: JANUARY 1 IS DAY 1. THE CUMULATIVE RANGE OF THE THREE "DAY OF YEAR" VARIABLES IS 1 - 366.

80.1.4.8.1.8.2.4 Terminal Input Message 18 Word 4

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
FOM															

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-11	NOT USED
12-15	TIME FIGURE OF MERIT (FOM)
<u>VALUE</u>	<u>ESTIMATED ACCURACY</u>
0	PROPER/NOMINAL OPERATION (USED WHEN EXTERNAL EQUIPMENT CANNOT COMPUTE ACTUAL FIGURE OF MERIT)
1	BETTER THAN 1 NANOSECOND (ns)
2	1 ns - 10 ns
3	10 ns - 100 ns
4	100 ns - 1 MICROSECOND (μ s)
5	1 MICROSECOND - 10 MICROSECONDS
6	10 MICROSECONDS - 100 MICROSECONDS
7	100 MICROSECONDS - 1 MILLISECOND
8	1 ms - 10 ms

TERMINAL INPUT MESSAGE 18

<u>VALUE</u>	<u>ESTIMATED ACCURACY</u>
9	GREATER THAN 10 ms OR FAULT
10-14	NOT USED
15	NO INFORMATION; ETR DATA IS INVALID

80.1.4.8.1.8.3 Status Word. See 80.1.4.8.1.1.3.

80.1.4.8.1.9 Message Format for Terminal Input Message 29 - MUX Control.

80.1.4.8.1.9.1 Command Word. See 80.1.4.8.1.1.1.

80.1.4.8.1.9.2 Data Word. The data word definition and format is given below.

<u>WORD</u>	<u>PARAMETER</u>
1	CONTROL WORD

Terminal Input Message 29 Word 1

MSB											LSB				
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-15	SET TO 0

80.1.4.8.1.9.3 Status Word. See 80.1.4.8.1.1.3.

80.1.4.8.1.10 Message Format for Terminal Input Message 30 - Clock Synchronization Data. NAVY AIR ONLY

80.1.4.8.1.10.1 Command Word. See 80.1.4.8.1.1.1.

80.1.4.8.1.10.2 Data Words. The data word definitions and formats are given below.

<u>WORDS</u>	<u>PARAMETERS</u>
1	GLOBAL SERVICE REQUEST (GSR)
2-3	TIME OF DAY

TERMINAL INPUT MESSAGE 29-30

Terminal Input Message 30 Word 1

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
CF	0	0	LENGTH					GSR IDENTIFIER							

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-7	GLOBAL SERVICE REQUEST (GSR) IDENTIFIER FOR GLOBAL SYSTEM CLOCK (GSC) SET TO 18 DECIMAL FOR GLOBAL SYSTEM CLOCK
8-12	LENGTH - ONLY SET TO '2' FOR GSC
13-14	SET TO '0'
15	CONTINUATION FLAG (CF) SET TO '0' FOR GSC.

Terminal Input Message 30 Words 2-3

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
TIME OF DAY (WORD 1)															
TIME OF DAY (WORD 2)															

DESIGNATION: 32-BIT SCALED BINARY
MSB: APPROXIMATELY 68,719.5
LSB: $32 \times 10^{**}(-6)$
UNITS: SECONDS
RANGE: 0 TO APPROXIMATELY 137,439

80.1.4.8.1.10.3 Status Word. See 80.1.4.8.1.1.3.

80.1.4.8.2 IU to Host Messages.

80.1.4.8.2.1 Message Format for Terminal Output Message 1 - Tape Recording Word Count, Received Message Word Count, Control Settings, Operational and Initialization Status, Chronometer Time of Day, Loopback Status #1, Number of NPG Buffers Available, Relay Inhibit Status, Time Quality, TSR Status and, for Navy Air, Number of Target Sorting Buffers Available, Advanced Slot Notification Status, Composite Blanking Status and Host NPG Status.

TERMINAL INPUT MESSAGE 30
TERMINAL OUTPUT MESSAGE 1

80.1.4.8.2.1.1 Command Word.

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
TERMINAL ADDRESS					1	SUBADDRESS/MODE					WORD COUNT/MODE CODE				
0	0	0	0	1											

The bit designation shall be as follows:

BIT DESIGNATION

0-4 WORD COUNT/MODE CODE
THE NUMBER OF DATA WORDS IN THIS TOM.
RANGE: 0-31

NOTE: WORD COUNT = 0 SPECIFIES 32 DATA WORDS. SEE 80.1.4.4.1.1 FOR APPLICATION AS THE MODE CODE, WHEN THE SUBADDRESS/MODE FIELD IS 0 OR 31.

5-9 SUBADDRESS/MODE. THE TOM SUBADDRESS NUMBER BEING REQUESTED BY THE HOST.
RANGE: 1 - 30 (SEE TABLE VIII-II).

NOTE: VALUES 0 AND 31 ARE USED FOR MODE COMMANDS (SEE 80.1.4.4.1.1).

10 T/R BIT SET TO 1 (TRANSMIT)

11-15 TERMINAL ADDRESS - SET TO "00001" (SEE 80.1.4.4.1).
NAVY SHIP ONLY - SEE (Y207A135-3.2.5.3.1(J))
NAVY AIR ONLY - SEE (Y207A134-3.2.5.2.3(J))

TERMINAL OUTPUT MESSAGE 1

80.1.4.8.2.1.2 Data Words. The data word definitions and formats are given below.

<u>WORDS</u>	<u>PARAMETERS</u>
1	RECEIVED MESSAGE DATA WORD COUNT
2-3	CONTROL SETTINGS
4	OPERATIONAL AND INITIALIZATION STATUS
5-6	CHRONOMETER TIME OF DAY
7	TIME TAG
8	TAPE RECORDING DATA WORD COUNT/TSR POOL VALIDITY
9-10	LOOPBACK STATUS, MESSAGE 1
11-12	LOOPBACK STATUS, MESSAGE 2
13-14	LOOPBACK STATUS, MESSAGE 3
15	NUMBER OF NPG BUFFERS AVAILABLE
16	NUMBER OF TARGET SORTING BUFFERS AVAILABLE - <u>NAVY AIR ONLY</u>
17	RELAY INHIBIT AND TSR DATA MESSAGE BUFFER STATUS AND, FOR <u>NAVY AIR ONLY</u> , ADVANCED SLOT NOTIFICATION AND COMPOSITE BLANKING STATUS.
18	OPERATIONAL STATUS AND TIME QUALITY
19-20	HOST NPG FILTER STATUS - <u>NAVY AIR ONLY</u>
21-22	TSR STATUS

TERMINAL OUTPUT MESSAGE 1

80.1.4.8.2.1.2.1 Terminal Output Message 1 Word 1

MSB						LSB									
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
R						RECEIVED MESSAGE DATA WORD COUNT									
M															
D															

The bit designation shall be as follows:

BIT DESIGNATION

0-9 RECEIVED MESSAGE DATA WORD COUNT
RANGE: 0-605

NOTE: RECEIVED MESSAGE DATA WORD COUNT MUST BE A MULTIPLE OF 5.

10-14 SPARE

15 RECEIVED MESSAGE DELETION (RMD)
LOGIC 1 = DURING THE PREVIOUS MUX CYCLE, THE SICP DELETED
AT LEAST ONE RECEIVED MESSAGE DUE TO BUFFER
OVERFLOW.

80.1.4.8.2.1.2.2 Terminal Output Message 1 Word 2

CONTROL SETTINGS 1

MSB						LSB									
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
L	XMIT MODE			I	E	E		COMM MODE		F	N	P	ORG. USER TYPE		
T				P	I	M				L	T	R			
T				F		E									
I				R		R									

The bit designation shall be as follows:

BIT DESIGNATION

0-2 ORGANIZATIONAL USER TYPE

BIT 2 • 1 • 0
 • • • • •
 0 • 0 • 1 SECONDARY USER
 0 • 1 • 0 PRIMARY USER
 1 • 0 • 0 NAVIGATION CONTROLLER
 1 • 0 • 1 SECONDARY NAV CONTROLLER

THE OTHER VALUES ARE NOT USED BY NAVY.

3 POSITION REFERENCE (PR)
LOGIC 1 = ENABLED
LOGIC 0 = DISABLED

TERMINAL OUTPUT MESSAGE 1

<u>BIT</u>	<u>DESIGNATION</u>
4	NET TIME REFERENCE (NTR) LOGIC 1 = ENABLED LOGIC 0 = DISABLED
5	FLIGHT LEADER (FL) - <u>NAVY AIR ONLY</u> LOGIC 1 = ENABLED LOGIC 0 = DISABLED
6-7	COMMUNICATIONS MODE BIT 7 • 6 • • • • • • 0 • 0 NO STATEMENT 0 • 1 MODE 1 1 • 0 MODE 2 1 • 1 MODE 4
8	SPARE
9	EMERGENCY (EMER) - <u>NAVY AIR ONLY</u> LOGIC 1 = ENABLED LOGIC 0 = DISABLED
10	EXERCISE INDICATOR (EI) LOGIC 1 = ENABLED LOGIC 0 = DISABLED
11	IPF RESET (IPFR) LOGIC 1 = ENABLED LOGIC 0 = DISABLED THE IPF RESET CONTROL FEEDBACK WILL BE A ONE-TIME TRANSMISSION TO THE HOST WITHIN 100 ms AFTER THE TIM 1 OR TIM 16 COMMAND FOR IPF RESET. FOR <u>NAVY AIR ONLY</u> , IF THE IPF RESET DISCRETE (90.1.1.4.1.4) IS USED, THAT FEEDBACK SHALL OCCUR WITHIN 500 ms.
12-14	TRANSMISSION MODE (XMIT MODE) BIT 14 • 13 • 12 • • • • • • • • • • 0 • 0 • 0 TDMA OFF 0 • 0 • 1 NORMAL 0 • 1 • 0 POLLING 1 • 0 • 0 DATA SILENT THE OTHER VALUES ARE NOT USED BY NAVY. WHEN LTTI IS ENABLED, THIS GIVES THE XMIT MODE THE TERMINAL WILL USE WHEN LTTI IS DISABLED.
15	LTTI STATUS (LTTI) LOGIC 1 = ENABLED LOGIC 0 = DISABLED

TERMINAL OUTPUT MESSAGE 1

80.1.4.8.2.1.2.3 Terminal Output Message 1 Word 3

CONTROL SETTINGS 2

MSB									LSB						
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	VC	CONTROL CHANNEL NET NUMBER							VOICE CHANNEL NET NUMBER						

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
------------	--------------------

0-6	VOICE CHANNEL NET NUMBER 0-126 = DESIGNATED VOICE CHANNEL NET NUMBER 127 = VOICE CHANNEL IS DEACTIVATED
-----	---

7-13	CONTROL CHANNEL NET NUMBER 0-126 = DESIGNATED CHANNEL NET NUMBER 127 = CONTROL CHANNEL IS DEACTIVATED
------	---

14	VOICE CHANNEL GIVEN IN BITS 0-6 OF THIS WORD (VC) 0-A 1-B
----	---

NOTE: THE IU WILL ALTERNATE (ACROSS MUX CYCLES) BETWEEN VOICE CHANNELS A AND B.

15	SPARE
----	-------

80.1.4.8.2.1.2.4 Terminal Output Message 1 Word 4

OPERATIONAL AND INITIALIZATION STATUS

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
T D M A F	H P A F	V S W R B F	V S W R A F	S D U F	I U F	D D P F	R T F	B A T F	S D U A L	NES		D C V E	INIT STATUS		

The bit designation shall be as follows:

TERMINAL OUTPUT MESSAGE 1

BIT DESIGNATION

0-2 INITIALIZATION STATUS

BIT	2	•	1	•	0	
	•	•	•	•	•	•
	0	•	0	•	0	NO STATEMENT
	0	•	0	•	1	AWAITING LOAD
	0	•	1	•	0	LOAD IN PROGRESS
	0	•	1	•	1	LOAD COMPLETE - VALIDITY TEST IN
		•		•		PROGRESS
	1	•	0	•	0	LOAD COMPLETE - VALID DATA OR
		•		•		THE HOST HAS SENT A START NET
		•		•		ENTRY COMMAND (SEE 80.1.2.21.1)
		•		•		FOLLOWING A BAD LOAD INDICATION
		•		•		FROM THE IU (i.e.,
		•		•		INITIALIZATION STATUS = 5).
	1	•	0	•	1	LOAD COMPLETE - LOAD ERROR
		•		•		DETECTED
	1	•	1	•	0	PLATFORM IDENTIFIER (BLOCK 0)
		•		•		REQUESTED
	1	•	1	•	1	NOT USED BY NAVY

3 DATA CHANGE VALIDITY ERROR (DCVE).
LOGIC 1 = IN THE PREVIOUS MUX CYCLE THE DPG'S VALIDITY
CHECK ROUTINES FOUND AT LEAST ONE VALIDITY ERROR
IN A HOST-SUBMITTED INITIALIZATION DATA CHANGE
(SEE 80.1.4.6.1.3).

NOTE: INITIALIZATION BLOCKS 16-19, 21-22 AND 56-59 HAVE NO VALIDITY
CHECKS AND THUS WILL NEVER GENERATE A DCVE. FOR INITIALIZATION
BLOCKS 1, 2, 20, 23, 24, 44 AND 63 THE IU SHALL SET THE DCVE
BIT (WHEN THERE IS A VALIDITY ERROR) IN A MAXIMUM OF 19 SLOTS
FROM THE TIME OF THE TIM 1 ARRIVAL AT THE IU; FOR
INITIALIZATION BLOCKS 3-15, THE IU SHALL SET THE DCVE BIT (FOR
A VALIDITY ERROR) WITHIN 6 SLOTS PLUS 13 SLOTS FOR EACH SLOT
ASSIGNMENT BLOCK (RANGE: 1-5) THE INITIALIZATION BLOCK
CONTAINS.

4-5 NET ENTRY STATUS (NES)

BIT	5	•	4	
	•	•	•	•
	0	•	0	NET ENTRY HAS NOT BEEN INITIATED
	0	•	1	NET ENTRY IN PROCESS
	1	•	0	COARSE SYNC
	1	•	1	FINE SYNC

<u>BIT</u>	<u>DESIGNATION</u>
6	SDU ALERT (SDUAL) LOGIC 1 = FAIL
7	BATTERY FAIL (BATF) LOGIC 1 = FAIL
8	R/T FAIL (RTF) LOGIC 1 = FAIL
9	DDP FAIL (DDPF) LOGIC 1 = FAIL
10	IU FAIL (IUF) LOGIC 1 = FAIL
11	SDU FAIL (SDUF) LOGIC 1 = FAIL
12	ANTENNA A VSWR FAIL (VSWRAF) LOGIC 1 = FAIL
13	ANTENNA B VSWR FAIL (VSWRBF) LOGIC 1 = FAIL
14	HPAG FAIL (HPAF) LOGIC 1 = FAIL
15	TDMA FAIL (TDMAF) LOGIC 1 = FAIL

NOTE: BITS 8-11 AND 14 ARE DETERMINED BY WRA BIT ALGORITHMS ONLY.
BITS 6, 7, 12, 13 AND 15 ARE DETERMINED BY OPERATIONAL AND WRA
BIT ALGORITHMS.

80.1.4.8.2.1.2.5 Terminal Output Message 1 Word 5 Chronometer Time of Day

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
N					CHRONOMETER TIME OF DAY (HOURS)					CHRONOMETER TIME OF DAY (MINUTES)					
T															
V															

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-5	CHRONOMETER TIME OF DAY (MINUTES) LSB: 1 MINUTE RANGE: 0-59
6-10	CHRONOMETER TIME OF DAY (HOURS) LSB: 1 HOUR RANGE: 0-23
11-14	SPARE
15	NET TIME VALIDITY (NTV) LOGIC 1 = VALID (SYNC STATUS = COARSE SYNC CONFIRMED, FINE SYNC IN PROGRESS, OR FINE SYNC CONFIRMED) LOGIC 0 = INVALID

80.1.4.8.2.1.2.6 Terminal Output Message 1 Word 6 Chronometer Time of Day

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
			CHRONOMETER TIME OF DAY (SECONDS)							CHRONOMETER TIME OF DAY (SLOTS)					

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-6	CHRONOMETER TIME OF DAY (SLOTS) LSB: 1 SLOT RANGE: 0-127
7-12	CHRONOMETER TIME OF DAY (SECONDS) LSB: 1 SEC RANGE: 0-59
13-15	SPARE

TERMINAL OUTPUT MESSAGE 1

80.1.4.8.2.1.2.7 Terminal Output Message 1 Word 7

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
TIME TAG															

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-15	TIME TAG (IN SLOTS) CORRESPONDING TO "TIME OF DAY" IN WORDS 5-6 OF THIS TOM. RANGE: 0-65535 SLOTS. THIS TIME TAG IS USED BY THE NICP AND SICP IN THEIR DATA TRANSFER BLOCKS AND WILL BE USED IN HEADER WORD 4 OF TERMINAL OUTPUT MESSAGES 2-20 (SEE 80.1.4.8.2.2.2) AND WORD 2 OF TERMINAL OUTPUT MESSAGE 30 (SEE 80.1.4.8.2.6.2.2).

80.1.4.8.2.1.2.8 Terminal Output Message 1 Word 8

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
V ₇	V ₆	V ₅	V ₄	V ₃	V ₂	V ₁	V ₀	TAPE RECORDING WORD COUNT							

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-7	TAPE RECORDING WORD COUNT RANGE: 0-224
8-15	TSR POOL VALIDITY BITS LOGIC 1 = IN THE LAST INITIALIZATION LOAD FROM THE HOST THERE WAS DATA THAT WOULD PASS TSR VALIDITY CHECKING FOR THE GIVEN TSR POOL. NOTES: 1) THIS VALIDITY CHECKING (LABELED START-UP VALIDITY CHECKING) IS DISCUSSED IN 30.4.13.1 2) THE TERMINAL IGNORES THE QUIESCENT BITS (WHICH ARE RELEVANT TO NPG=9, THE CONTROL NPG) IN PERFORMING CHECKING.

TERMINAL OUTPUT MESSAGE 1

80.1.4.8.2.1.2.9 Terminal Output Message 1 Words 9,11,13

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
R/C											LBSTAT				

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
------------	--------------------

0-4	LOOPBACK STATUS (LBSTAT)
-----	--------------------------

<u>VALUE</u>	<u>STATEMENT</u>
--------------	------------------

0	TRANSMITTED: NO ERRORS (STATUS BLOCK 8 & 1/0 DTB)
1	TRANSMITTED: DECODE FAIL. THE LOOPBACK CONTAINS A HEADER, BLOCK DECODE OR OUTER PARITY FAIL. (STATUS BLOCK 8 & 1/0 DTB)
2	TRANSMITTED: TOA COMPARISON FAIL. THE TOA OF THE LOOPBACK MESSAGE (WITH TRANSMIT AND RECEIVE CABLE DELAY COMPENSATION VALUES -- 30.4.2.16, 30.4.2.19, 30.4.2.20, 30.4.2.23 AND 30.4.3.9 REMOVED) DID NOT FALL WITHIN SOME DEGREE OF TOLERANCE. (STATUS BLOCK 8 & 1/0 DTB)
3	TRANSMITTED: NO LOOPBACK RECEIVED. (STATUS BLOCK 8 & 1/0 DTB)
4	R/C RECEIVED: THE ACTUAL R/C VALUE IS GIVEN IN BITS 11-15 OF THIS WORD.
5	R/C NOT RECEIVED: ALL RETRANSMISSIONS HAVE BEEN MADE.
6	DELETED BY NICP: BUFFERS FULL
7	NOT USED BY NAVY
8	NOT USED BY NAVY
9	NOT USED.
10	DELETED BY NICP: NON-SPECIFIC. REASONS FOR DELETION INCLUDE: NPG UNAVAILABLE; XMIT MODE (DATA SILENT/POLLING/LTTI); PRIORITY BUMP; STALENESS; SPECIFIED SLOT/SET IS A RECEIVE SLOT; TIME SHIFT (AS A RESULT OF A NET TIME UPDATE); INTERROGATION BUFFER OVERFLOW; R/C MESSAGE HAS A SPECIFIC SLOT/SET SPECIFIED; IPF DUTY FACTOR EXCEEDED.
11	REJECTED BY SICP: NPG OR TSR MESSAGE BUFFER IS FULL. H (5/2 DTB)

TERMINAL OUTPUT MESSAGE 1

<u>VALUE</u>	<u>STATEMENT</u>
12	REJECTED BY SICP: NPG UNAVAILABLE. DETERMINED BY SICP UPON RECEIPT OF A MESSAGE VIA TIM 2-11. H
13	DELETED BY SICP: XMIT MODE. THE DPG IS IN DATA SILENCE, LONG TERM TRANSMIT INHIBIT OR NOT IN FINE SYNC UPON RECEIPT OF A MESSAGE VIA TIM 2 - 11.
14	DELETED BY SICP: STALENESS. A MESSAGE IN AN NPG BUFFER, THE TSR DATA MESSAGE BUFFER OR, FOR <u>NAVY AIR ONLY</u> , THE AIR PLATFORM AND SYSTEM STATUS MESSAGE BUFFER, HAS EXCEEDED ITS STALENESS.(5/2 DTB)
15	DELETED BY SICP: NON-SPECIFIC. REASONS FOR DELETION INCLUDE: FREE TEXT MESSAGE WITHOUT AN NPG OR SPECIFIC SLOT/SET; PACKING LIMIT EXCEEDED; COMMON CARRIER SUBADDRESS COUNTER EXCEEDED. MESSAGE WAS IN NPG METERING BUFFER WHEN NPG REASSIGNED TO BE TSR NPG OR IN THE TSR BUFFER WHEN THE TSR POOL IS SUSPENDED; XMIT TIME OF SPECIFIC SLOT/SET (OR TSR) MESSAGE HAS EXPIRED. H
16	REJECTED BY SICP: TARGET SORTING A BUFFER FULL - <u>NAVY AIR ONLY</u>
17	REJECTED BY SICP: TARGET SORTING B BUFFER FULL - <u>NAVY AIR ONLY</u>
18	REJECTED BY SICP: TARGET SORTING A NPG UNAVAILABLE - <u>NAVY AIR ONLY</u>
19	REJECTED BY SICP: TARGET SORTING B NPG UNAVAILABLE. - <u>NAVY AIR ONLY</u>
20	DELETED BY SICP: STALE IN TARGET SORTING A BUFFER. - <u>NAVY AIR ONLY</u>
21	DELETED BY SICP: STALE IN TARGET SORTING B BUFFER. - <u>NAVY AIR ONLY</u>
22	REJECTED BY SICP: TARGET SORTING A PACKING LIMIT EXCEEDED. - <u>NAVY AIR ONLY</u>
23	REJECTED BY SICP: TARGET SORTING B PACKING LIMIT EXCEEDED. - <u>NAVY AIR ONLY</u>
24	DELETED BY SICP: INTERNAL MESSAGE TRANSFER (TO NICP) BUFFER OVERFLOW.
25	REJECTED BY SICP: THE MESSAGE BUFFER ASSOCIATED WITH THE R/C ID (NOT LB ID) IN THE FOLLOWING WORD, BITS 0-4, IS EMPTY. - <u>NAVY AIR ONLY</u>

H FOR NAVY AIR ONLY, UPON RECEIPT OF AN R/C RESPONSE VIA TIM 16, THE LB ID FIELD IN THE NEXT WORD WILL BE THE "R/C ID" OF THE TIM 16 RESPONSE.

TERMINAL OUTPUT MESSAGE 1

<u>BIT</u>	<u>DESIGNATION</u>
5-10	SPARE
11-15	RECEIPT/COMPLIANCE CODE (R/C) RANGE: 0 - 31 DESCRIPTION OF VALUES IS GIVEN IN TIDP-TE, VOL II, PARAGRAPH 1.1.7. THIS FIELD IS VALID IF LBSTAT (BITS 0-4) IS VALID AND SET TO 4.

NOTE: THIS WORD IS VALID/INVALID AS PER "LB SOURCE" IN THE NEXT WORD.

TERMINAL OUTPUT MESSAGE 1

80.1.4.8.2.1.2.10 Terminal Output Message 1 Words 10,12,14

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
LB SOURCE				LB ID / R/C ID											

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>	
	11	0-
	LOOPBACK ID (LB ID). THE LOOPBACK ID DEFINED BY THE HOST IN HEADER WORD 9 OF TIM'S 2-11 (SEE 80.1.4.8.1.2.2.2), OR, FOR <u>NAVY AIR ONLY</u> , IN WORD 1 OF TIMS 13 TO 15 (SEE 80.1.4.8.1.4.2 AND 80.1.4.8.1.5.2) FOR <u>NAVY AIR ONLY</u> , IF LBSTAT = 11, 12, 15, OR 25, THEN THE R/C ID, PROVIDED BY THE HOST IN ACCORDANCE WITH 80.1.4.8.1.6.2.7, CAN APPEAR.	
12-15	LOOPBACK SOURCE (LB SOURCE)	
	13 - HOST ID. DATA IN THIS WORD AND PREVIOUS WORD IS VALID.	
	15 - NO STATEMENT. DATA IN THIS WORD AND PREVIOUS WORD IS NOT VALID.	
	OTHER VALUES RESERVED FOR IU USAGE	

TERMINAL OUTPUT MESSAGE 1

80.1.4.8.2.1.2.11 Terminal Output Message 1 Word 15

NUMBER OF NPG BUFFERS AVAILABLE

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
BU3						BU2					BU1				

The bit designation shall be as follows:

BIT DESIGNATION

0-4 BUFFER 1 STATUS (BU1)
NUMBER OF BUFFERS AVAILABLE IN THE SICP FOR THE FIRST
HOST-DEFINED NPG (SEE 80.1.2.14.11).
RANGE: 0 - 20
VALUES: 21 - 31 ARE NOT USED

NOTE: EACH BUFFER IS CAPABLE OF STORING ONE FIXED FORMAT COMMON
CARRIER MESSAGE BLOCK, AS INPUT VIA TIM 2-11, FOR WHICH THE
MESSAGE BODY HAS 12 OR FEWER CODEWORDS.

5-9 BUFFER 2 STATUS (BU2)
NUMBER OF BUFFERS AVAILABLE IN THE SICP FOR THE SECOND
HOST-DEFINED NPG (SEE 80.1.2.14.12)
RANGE: 0 - 20
VALUES 21 - 31 ARE NOT USED
SEE NOTE FOR BUFFER 1 STATUS

TERMINAL OUTPUT MESSAGE 1

<u>BIT</u>	<u>DESIGNATION</u>
10-14	BUFFER 3 STATUS (BU3) NUMBER OF BUFFERS AVAILABLE IN THE SICP FOR THE THIRD HOST-DEFINED NPG (SEE 80.1.2.14.2). RANGE: 0 - 20 VALUES 21 - 31 ARE NOT USED SEE NOTE FOR BUFFER 1 STATUS.
15	SPARE

TERMINAL OUTPUT MESSAGE 1

80.1.4.8.2.1.2.12 Terminal Output Message 1 Word 16 Number of Target Sorting Buffers Available.

<u>NAVY AIR ONLY</u>															
MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
				BUFF B						BUFF A					

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-5	NUMBER OF TARGET SORTING A BUFFERS AVAILABLE (BUFF A) - <u>NAVY AIR ONLY</u> RANGE: 0 - 40 VALUES 41 - 63 ARE NOT USED
6-11	NUMBER OF TARGET SORTING B BUFFERS AVAILABLE (BUFF B) - <u>NAVY AIR ONLY</u> RANGE: 0 - 40 VALUES 41 - 63 ARE NOT USED
12-15	SPARE

NOTE: EACH BUFFER IS CAPABLE OF STORING ONE TARGET SORTING MESSAGE AND ITS ASSOCIATED HEADER INFORMATION.

80.1.4.8.2.1.2.13 Terminal Output Message 1 Word 17 Advanced Slot Notification, Composite Blanking for NAVY AIR ONLY, and Relay Inhibit and TSR Data Message Buffer Status.

MSB												LSB			
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
						TSR BUFFSTAT						R I	C B L L	C B	A S N

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	ADVANCED SLOT NOTIFICATION (ASN) STATUS - <u>NAVY AIR ONLY</u> LOGIC 1 = ENABLED LOGIC 0 = DISABLED
1	COMPOSITE BLANKING (CB) STATUS - <u>NAVY AIR ONLY</u> LOGIC 1 = ENABLED LOGIC 0 = DISABLED

TERMINAL OUTPUT MESSAGE 1

<u>BIT</u>	<u>DESIGNATION</u>
2	COMPOSITE BLANKING LOGIC LEVEL (CBL) - <u>NAVY AIR ONLY</u> LOGIC 1 = INVERTED LOGIC 0 = TRUE
3	RELAY INHIBIT (RI) STATUS LOGIC 1 = ENABLED LOGIC 0 = DISABLED
4-9	TSR DATA MESSAGE BUFFER STATUS (TSR BUFFSTAT) RANGE: 0 - 60 BUFFERS AVAILABLE VALUES 61 - 63 ARE NOT USED

NOTE: EACH BUFFER CAN HOLD ONE FIXED FORMAT COMMON CARRIER MESSAGE BLOCK, AS INPUT VIA TIM 2-11, FOR WHICH THE MESSAGE BODY IS 1-12 CODEWORDS.

10-15 SPARE

TERMINAL OUTPUT MESSAGE 1

80.1.4.8.2.1.2.14 Terminal Output Message 1 Word 18 Operational Status and Time Quality

MSB											LSB				
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Q_T											I P F F	T O L D	R C V R F	S Y N T H F	L P

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOW POWER OUTPUT (LP). ANTENNA A AND/OR ANTENNA B POWER OUTPUT < 3 dB DOWN. LOGIC 1 = FAILURE
1	SYNTHESIZER FAIL (R/T) (SYNTHF) LOGIC 1 = FAILURE
2	RECEIVER FAIL (R/T) (RCVRF) LOGIC 1 = FAILURE
3	THERMAL OVERLOAD (TOLD) LOGIC 1 = FAILURE
4	IPF FAIL (IPFF) LOGIC 1 = FAILURE
5-11	SPARE
12-15	TIME QUALITY (Q_T) RANGE: 0-15. SEE TABLE IV-IV FOR A DESCRIPTION OF THE VALUES.

TERMINAL OUTPUT MESSAGE 1

80.1.4.8.2.1.2.15 Terminal Output Message 1 Words 19-20 Current settings of Host NPG filters. Same format as Initialization Block 56, Words 7 - 8 (see 80.1.2.14.5).- NAVY AIR ONLY

80.1.4.8.2.1.2.16 Terminal Output Message 1 Words 21-22 TSR Pool Status for one of the TSR pools 0 - 7 if the Terminal is operational for that Pool, these words will present the data for that pool. The format is the same as that of TSR status words 1 and 2 in Status Block 30 (see 40.5.25.1).

80.1.4.8.2.1.3 Status Word All Terminal Output Messages

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
TERMINAL ADDRESS					ME						B	B	S		TF
0	0	0	0	1							C		S		

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	TERMINAL FLAG (TF)
1	NOT USED BY NAVY
2	SUBSYSTEM FLAG (SS)
3	BUSY (B)
4	BROADCAST COMMAND RECEIVED (BC)
5-9	NOT USED BY NAVY
10	MESSAGE ERROR (ME)
11-15	TERMINAL ADDRESS - SET TO "00001" (SEE 80.1.4.4.1). <u>NAVY SHIP ONLY</u> - SEE (Y207A135-3.2.5.3.1(J)) <u>NAVY AIR ONLY</u> - SEE (Y207A134-3.2.5.2.3(J))

NOTE: SEE 80.1.4.4.2 FOR STATUS BIT DEFINITIONS. ALL BITS NOT USED ARE SET TO ZERO.

NOTE: (1) THE STATUS WORD FOR EACH TERMINAL OUTPUT MESSAGE FOLLOWS THE COMMAND WORD AS REQUIRED BY 1553B MUX PROTOCOL.

(2) FOR BITS 0, 2, 3, 4 AND 10, LOGIC 1 = TRUE, LOGIC 0 = NOT TRUE

80.1.4.8.2.2 Message Format for Terminal Output Messages 2 through 20 - Received Message Data.

80.1.4.8.2.2.1 Command Word. See 80.1.4.8.2.1.1.

TERMINAL OUTPUT MESSAGE 1

80.1.4.8.2.2.2 Data Words. The data word definitions and formats are given below.

Terminal Output Messages 2-20 Words 1 - 32

The data words consist of consecutive message blocks of information. Each message block, which contains all the information for one message, consists of five words of header plus the message body. The five header words are listed below. The first header is in words 1-5 of subaddress 2. The first message body follows immediately after, e.g. starting in word 6 of subaddress 2. The formats used for the message body are identical to those presented in 80.1.4.8.1.2.2.3. The second message block (if necessary) begins immediately after the end of the first message body. This packing of message blocks continues until the supply of messages has been exhausted.

MSB																LSB
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
header wd 1		TYPE		WORD COUNT												R / C
header wd 2		STN														
header wd 3								NPG								
header wd 4	TIME TAG															
header wd 5												R/C ID				

The bit designation shall be as follows:

Terminal Output Messages 2 - 20 Header Word 1

<u>BIT</u>	<u>DESIGNATION</u>
0	R/C RESPONSE REQUIRED (R/C) LOGIC 0 = R/C RESPONSE IS NOT REQUIRED (IGNORE RECEIPT/COMPLIANCE ID IN HEADER WORD 5) LOGIC 1 = R/C RESPONSE IS REQUIRED
1-5	SPARE
6-12	WORD COUNT NUMBER OF 16-BIT WORDS IN THE MESSAGE BODY. RANGE: 5-120.

TERMINAL OUTPUT MESSAGE 2-20

<u>BIT</u>	<u>DESIGNATION</u>
13-14	MESSAGE TYPE (TYPE)
	BIT 14 • 13 • • • • • 0 • 0 FREE TEXT - UNCODED 0 • 1 FREE TEXT - CODED 1 • 0 FIXED FORMAT 1 • 1 NOT USED
15	SPARE

Terminal Output Messages 2-20 Header Word 2

<u>BIT</u>	<u>DESIGNATION</u>
0-14	JTIDS SOURCE TRACK NUMBER (STN) 00000 - 77777 (OCTAL)
15	SPARE

Terminal Output Messages 2-20 Header Word 3

<u>BIT</u>	<u>DESIGNATION</u>
0-8	NET PARTICIPATION GROUP OF THE SLOT IN WHICH THE MESSAGE WAS RECEIVED (NPG). 0 = UNASSIGNED SLOT 1-511 = RECEIVED NPG NUMBER
9-15	SPARE

Terminal Output Messages 2-20 Header Word 4

<u>BIT</u>	<u>DESIGNATION</u>
0-15	TIME TAG THE TIME TAG OF THE SLOT IN WHICH THE MESSAGE WAS RECEIVED FROM THE JTIDS NETWORK. THE CORRESPONDENCE BETWEEN TIME TAG AND TIME OF DAY (HOUR/MINUTE/SECOND/SLOT) IS GIVEN IN TOM 1, WORDS 5-7.

TERMINAL OUTPUT MESSAGE 2-20

Terminal Output Messages 2-20 Header Word 5BIT DESIGNATION

0-4 RECEIPT/COMPLIANCE ID (R/C ID). THIS ID IS A NUMBER WHICH THE SICP ASSIGNS TO A FIXED FORMAT MESSAGE REQUIRING A RESPONSE FROM THE HOST. THE RESPONSE CAN BE CONVEYED TO THE IU USING TIM 16, WORDS 6 AND 7. THIS VARIABLE IS VALID ONLY IF HEADER WORD 1, BIT 0 (R/C) = 1. ITS VALUE, WHEN VALID, SHALL BE 1 TO 16. THOSE NUMBERS SHALL BE CYCLED, IN SEQUENCE, BEFORE REUSE.

5-15 SPARE

80.1.4.8.2.2.3 Status Word. See 80.1.4.8.2.1.3.

80.1.4.8.2.3 Message Format for Terminal Output Messages 21 through 27 - Tape Recording Data

80.1.4.8.2.3.1 Command Word. See 80.1.4.8.2.1.1.

80.1.4.8.2.3.2 Data Words. The data word definitions and formats are given below. For NAVY AIR ONLY, the format depends on the state of the Flycatcher Control variable in Initialization Block 58, Word 21 (80.1.2.16.6).

Terminal Output Messages 21-27 Words 1-32

NAVY SHIP ONLY - Each word contains Tape Recording Data. This data is described in 80.1.4.7.3. The format for the data is given in 50.1.3.2.2 of Appendix V.

80.1.4.8.2.3.2.1 Data Words When Flycatcher Disabled. - NAVY AIR ONLY
When Flycatcher is disabled, each word of TOM 21 - 27 contains Tape Recording Data. This data is described in 80.1.4.7.3. The format is specified in 50.1.3.2.2 of Appendix V.

80.1.4.8.2.3.2.2 Data Words When Flycatcher Enabled. - NAVY AIR ONLY
The data word definitions and formats of words 1 - 26 of TOM 21 are given below. Words 27 - 32 of TOM 21 and all of TOM 22 - 27 are not used.

TOM 21 WORDS

1-4	Flycatcher Identifier/Type
5	Data Type
6-7	Physical Memory Address
8	Not Used
9-10	Time of Day
11-26	Data Words 1 - 16

Terminal Output Message 21
Words 1-4

These words will be set to Flycatcher Input Words 1-4 as given by the Host in Initialization Block 58. See 80.1.2.16.1.

TERMINAL OUTPUT MESSAGE 21

Terminal Output Message 21 Word 5

MSB											LSB				
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
DATA TYPE															

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-15	DATA TYPE ONLY
20 (Hexadecimal)	= FLYCATCHER FUNCTION
60 (Hexadecimal)	= DISABLE FLYCATCHER FUNCTION
61 (Hexadecimal)	= FLYCATCHER STARTING ADDRESS ERROR

THE OTHER VALUES ARE NOT USED

Terminal Output Message 21 Words 6-7

MSB											LSB				
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
											M S B ADDRESS				
ADDRESS															L S B

Starting Physical Memory Address for Data. See 80.1.2.16.3 for valid ranges.

Terminal Output Message 21 Word 8

Set to 0.

Terminal Output Message 21 Words 9-10

Time Tag - Time of Day (Words 1 & 2) Time when Flycatcher data (in words 11 - 26) was compiled. This is based on the last Global System Clock (GSC) data received from the Host in Words 2 - 3 of TIM 30. See 80.1.4.8.1.10.2 for format.

If no GSC data is available, both words are set to FFFF (Hexadecimal).

TERMINAL OUTPUT MESSAGE 21

Terminal Output Message 21 Words 11-26

These words contain the contents of the 16 consecutive memory locations, starting with the address given in words 6 - 7. These values are given as zero for memory locations outside the valid range.

80.1.4.8.2.3.3 Status word. See 80.1.4.8.2.1.3

80.1.4.8.2.4 Message Format for Terminal Output Message 28 - Host-Requested Data.

80.1.4.8.2.4.1 Command Word. See 80.1.4.8.2.1.1.

80.1.4.8.2.4.2 Data Words. The data words definitions and formats are given below.

<u>WORDS</u>	<u>PARAMETERS</u>
--------------	-------------------

1	CONTROL WORD
2	ADDRESS WORD OR DATA WORD CODE
3-32	HOST-REQUESTED DATA

TERMINAL OUTPUT MESSAGE 21
TERMINAL OUTPUT MESSAGE 28

Terminal Output Message 28 Word 1 - Control Word

MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
		ATS		AE					RT		WC				

The bit designation shall be as follows:

BIT DESIGNATION

SEE 80.1.4.8.1.6.2.1 (TIM 16, WORD 1) FOR A DESCRIPTION OF THIS WORD.

Terminal Output Message 28 Word 2 - Used with Physical Addressing method

MSB														LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
ADDRESS															

The bit designation shall be as follows:

BIT DESIGNATION

SEE 80.1.4.8.1.6.2.2 (TIM 16, WORD 2) FOR A DESCRIPTION OF THIS WORD.

Terminal Output Message 28 Word 2 - Used with Data Word Code method

MSB											LSB				
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
BI						SDW					DWC				

The bit designation shall be as follows:

BIT DESIGNATION

SEE 80.1.4.8.1.6.2.2 (TIM 16, WORD 2) FOR A DESCRIPTION OF THIS WORD.

Terminal Output Message 28 Words 3-32

MSB														LSB	
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
HOST-REQUESTED DATA															

TERMINAL OUTPUT MESSAGE 28

80.1.4.8.2.4.3 Status Word. See 80.1.4.8.2.1.3

80.1.4.8.2.5 Message Format for Terminal Output Message 29 - Loopback Status #2 and, for Navy Air only, TACAN Data and Net Selection Status.

80.1.4.8.2.5.1 Command Word. See 80.1.4.8.2.1.1.

80.1.4.8.2.5.2 Data Words. The data word definitions and formats are given below.

<u>WORDS</u>	<u>PARAMETERS</u>
1-13	TACAN DATA - <u>NAVY AIR ONLY</u>
14-15	NET SELECTION STATUS - <u>NAVY AIR ONLY</u>
16-17	LOOPBACK STATUS, MESSAGE 4
18-19	LOOPBACK STATUS, MESSAGE 5
20-21	LOOPBACK STATUS, MESSAGE 6
22-23	LOOPBACK STATUS, MESSAGE 7
24-25	LOOPBACK STATUS, MESSAGE 8
26-27	LOOPBACK STATUS, MESSAGE 9
28-29	LOOPBACK STATUS, MESSAGE 10

Terminal Output Message 29 Words 1-13 TACAN Data (Navy Air Only)

These words are identical to corresponding words in Status Block 14 (See 40.5.13). The word correspondence is given below.

<u>TOM 29</u>	<u>Status Block 14</u>
word 1	word 3
word 2	word 4
word 3	word 5
word 4	word 6
word 5	word 7
word 6	word 8
word 7	word 9
word 8	word 10
word 9	word 11
word 10	word 12
word 11	word 15
word 12	word 16
word 13	word 17

Terminal Output Message 29 Word 14 Net Selection Word 1

<u>NAVY AIR ONLY</u>															
MSB										LSB					
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	RNPG									NSC				NSS	

The bit designation shall be as follows:

TERMINAL OUTPUT MESSAGE 29

<u>BIT</u>	<u>DESIGNATION</u>
0-1	NET SELECTION STATUS (NSS)
	BIT 1 • 0 • • • • • 0 • 0 NO STATEMENT 0 • 1 REQUEST IN PROGRESS 1 • 0 REQUEST EXECUTED 1 • 1 REQUEST REJECTED
2-5	NET SELECTION COUNTER (NSC) THE COUNTER (INCREMENTED BY 1 EACH TIME A NEW NET SELECTION REQUEST IS RECEIVED) USED TO IDENTIFY THE NET SELECTION REQUEST THAT IS DESCRIBED IN THIS WORD AND THE NEXT WORD. RANGE: 0 - 15
6-14	NPG ON WHICH THE NET CHANGE WAS REQUESTED (RNPG) RANGE: 0 - 511 IF NPG = 0, DEFAULT NET CHANGE WAS REQUESTED
15	SPARE

Terminal Output Message 29 Word 15 Net Selection Word 2

<u>NAVY AIR ONLY</u>														
MSB														LSB
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1 0
									RNET					

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-6	REQUESTED NET NUMBER (RNET) RANGE: 0 - 127
7-15	SPARE

Terminal Output Message 29 Loopback Status Word 1
Words 16,18,20,22,24,26,28
 SAME FORMAT AS TOM 1, WORD 9 (SEE 80.1.4.8.2.1.2.9)

Terminal Output Message 29 Loopback Status Word 2
Words 17,19,21,23,25,27,29
 SAME FORMAT AS TOM 1, WORD 10 (SEE 80.1.4.8.2.1.2.10)

80.1.4.8.2.5.3 Status Word. See 80.1.4.8.2.1.3.

80.1.4.8.2.6 Message Format for Terminal Output Message 30 - Terminal Navigation Data and, for Navy Air only, Data Type.

TERMINAL OUTPUT MESSAGE 29

80.1.4.8.2.6.1 Command Word. See 80.1.4.8.2.1.1.

80.1.4.8.2.6.2 Data Words. The data word definitions and formats are given below.

<u>WORDS</u>	<u>PARAMETERS</u>
1	JTIDS NAV SYSTEM DEFINITION, NAV VALIDITY AND FOR <u>NAVY AIR ONLY</u> , DATA TYPE
2	NAV DATA TIME TAG
3-4	GEODETTIC LATITUDE
5-6	GEODETTIC LONGITUDE
7-8	GEODETTIC NORTH VELOCITY
9-10	GEODETTIC EAST VELOCITY
11-12	GEODETTIC ALTITUDE - <u>NAVY AIR ONLY</u>
	GEODETTIC AZIMUTH CORRECTION - <u>NAVY SHIP ONLY</u>
13-14	GEODETTIC AZIMUTH CORRECTION - <u>NAVY AIR ONLY</u>
	GEODETTIC COURSE - <u>NAVY SHIP ONLY</u>
15-16	RELATIVE LATITUDE
17-18	RELATIVE LONGITUDE
19-20	RELATIVE NORTH VELOCITY
21-22	RELATIVE EAST VELOCITY
23-24	RELATIVE ALTITUDE
25-26	RELATIVE AZIMUTH CORRECTION
27-28	RELATIVE COURSE - <u>NAVY SHIP ONLY</u>
29	GEODETTIC QUALITIES
30	RELATIVE QUALITIES
31-32	TIME OF COMPUTATION - <u>NAVY AIR ONLY</u>

80.1.4.8.2.6.2.1 Terminal Output Message 30 Word 1

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
NV			DT			P D	SYS TYPE								

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-5	SPARE
6-8	JTIDS NAV SYSTEM TYPE (SYS TYPE)
BIT	8 • 7 • 6
	• • • • • • • •
	0 • 0 • 0 INERTIAL
	0 • 0 • 1 NON-INERTIAL
	0 • 1 • 0 TOA-ONLY (NO D/R)
	0 • 1 • 1 NOT USED BY NAVY
	. • . • . . . •
	1 • 1 • 1 NOT USED BY NAVY

TERMINAL OUTPUT MESSAGE 30

<u>BIT</u>	<u>DESIGNATION</u>
9	PLATFORM DEFINITION (PD) LOGIC 0 = MOBILE LOGIC 1 = FIXED POINT
10-11	SPARE
12	DATA TYPE (DT) - <u>NAVY AIR ONLY</u> LOGIC 0 = CORRECTION DATA LOGIC 1 = ABSOLUTE DATA
13	SPARE
14-15	NAV VALIDITY (NV)
	BIT 15 • 14
	••••••••
	0 • 0 ALL QUANTITIES INVALID
	0 • 1 ONLY GEODETIC QUANTITIES VALID
	1 • 0 GEODETIC AND GRID QUANTITIES VALID
	1 • 1 NOT USED BY NAVY

80.1.4.8.2.6.2.2 Terminal Output Message 30 Word 2

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
NAV DATA TIME TAG															

The bit designation shall be as follows:

DESCRIPTION: 16-BIT SCALED BINARY
MSB: 32,768
LSB: 1
UNITS: SLOTS
RANGE: 0 TO 65,535
NOTE: DENOTES TIME TAG OF SLOT IN WHICH THE ASSOCIATED NAV DATA IS
VALID. THIS WORD HAS THE SAME DEFINITION AS THE TIME OF DAY AND
ITS ASSOCIATED TIME TAG (SEE TOM 1, WORDS 5-7)

80.1.4.8.2.6.2.3 Terminal Output Message 30 Words 3-4

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 3	GEODETIC LATITUDE (WORD 1)																
wd 4	GEODETIC LATITUDE (WORD 2)																

The bit designation shall be as follows:

DESCRIPTION: 32-BIT BAM (SEE TABLE IV-III)

MSB: -180

LSB: $180 \times 2^{**}(-31)$

UNITS: DEGREES

RANGE: \forall 90

VALIDITY: SPECIFIED BY NAV VALIDITY IN WORD 1. FIELD VALUES GREATER THAN + 90 OR LESS THAN - 90 ARE INVALID OUTPUTS.

NOTE: IF THE TERMINAL IS NAVY AIR AND THE DATA TYPE IN WORD 1 INDICATES CORRECTION DATA, THEN THIS FIELD IS JTIDS GEODETIC LATITUDE MINUS HOST PLATFORM LATITUDE. OTHERWISE, THE DATA IS ABSOLUTE LATITUDE AND SOUTH IS NEGATIVE.

80.1.4.8.2.6.2.4 Terminal Output Message 30 Words 5-6

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 5	GEODETIC LONGITUDE (WORD 1)																
wd 6	GEODETIC LONGITUDE (WORD 2)																

The bit designation shall be as follows:

DESCRIPTION: 32-BIT BAM (SEE TABLE IV-III)

MSB: -180

LSB: $180 \times 2^{**}(-31)$

UNITS: DEGREES

RANGE: -180 TO +180-LSB

VALIDITY: SPECIFIED BY NAV VALIDITY IN WORD 1

NOTE: IF THE TERMINAL IS NAVY AIR AND THE DATA TYPE IN WORD 1 INDICATES CORRECTION DATA, THEN THIS FIELD IS JTIDS GEODETIC LONGITUDE MINUS HOST PLATFORM LONGITUDE. OTHERWISE, THE DATA IS ABSOLUTE LONGITUDE AND WEST IS NEGATIVE.

TERMINAL OUTPUT MESSAGE 30

80.1.4.8.2.6.2.5 Terminal Output Message 30 Words 7-8

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 7	GEODETIC NORTH VELOCITY (WORD 1)																
wd 8	GEODETIC NORTH VELOCITY (WORD 2)																

The bit designation shall be as follows:

DESCRIPTION: 32-BIT TWO'S COMPLEMENT
 MSB: -4096
 LSB: $2^{**}(-19)$
 UNITS: FEET/SEC
 RANGE: -4096 TO +4096-LSB
 VALIDITY: SPECIFIED BY NAV VALIDITY IN WORD 1
 NOTE: SOUTH IS NEGATIVE

80.1.4.8.2.6.2.6 Terminal Output Message 30 Words 9-10

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 9	GEODETIC EAST VELOCITY (WORD 1)																
wd 10	GEODETIC EAST VELOCITY (WORD 2)																

The bit designation shall be as follows:

FORMAT AND VALIDITY ARE SAME AS GEODETIC NORTH VELOCITY (WORDS 7-8)

NOTE: WEST IS NEGATIVE

80.1.4.8.2.6.2.7 Terminal Output Message 30 Words 11-12NAVY AIR ONLY

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 11	GEODETIC ALTITUDE (WORD 1)																
wd 12	GEODETIC ALTITUDE (WORD 2)																

The bit designation shall be as follows:

DESCRIPTION: 32-BIT TWO'S COMPLEMENT
 MSB: -131,072
 LSB: $2^{**}(-14)$
 UNITS: FEET
 RANGE: -131,072 TO +131,072-LSB

TERMINAL OUTPUT MESSAGE 30

VALIDITY: SPECIFIED BY NAV VALIDITY IN WORD 1

NOTE: IF DATA TYPE IN WORD 1 INDICATES ABSOLUTE DATA, THEN DOWN IS NEGATIVE. IF DATA TYPE IN WORD 1 INDICATES CORRECTION DATA, THEN JTIDS ALTITUDE MINUS HOST PLATFORM ALTITUDE.

80.1.4.8.2.6.2.8 Terminal Output Message 30 (Words 13-14 - NAVY AIR ONLY), (Words 11-12 - NAVY SHIP ONLY).

NAVY AIR ONLY

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 13	GEODETIC AZIMUTH CORRECTION (WORD 1)																
wd 14	GEODETIC AZIMUTH CORRECTION (WORD 2)																

NAVY SHIP ONLY

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 11	GEODETIC AZIMUTH CORRECTION (WORD 1)																
wd 12	GEODETIC AZIMUTH CORRECTION (WORD 2)																

The bit designation shall be as follows:

DESCRIPTION: 32-BIT BAM (SEE TABLE IV-III)

MSB: -180

LSB: $180 \times 2^{**}(-31)$

UNITS: DEGREES

RANGE: $\nabla 90$

VALIDITY: VALID IF NAV VALIDITY IN WORD 1 INDICATES GEODETIC QUANTITIES VALID AND DATA TYPE IN WORD 1 IS SET TO CORRECTION DATA (AIR ONLY), OR JTIDS NAV SYSTEM TYPE IN WORD 1 IS SET TO INERTIAL OR NON-INERTIAL (SHIP ONLY).

NOTE: TERMINAL'S ESTIMATE OF GEODETIC AZIMUTH CORRECTION, POSITIVE CLOCKWISE FROM PLATFORM NORTH AXIS TO REFERENCE NORTH AXIS.

TERMINAL OUTPUT MESSAGE 30

80.1.4.8.2.6.2.9 Terminal Output Message 30 Words 13-14

NAVY SHIP ONLY

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 13	GEODETIC COURSE (WORD 1)																
wd 14	GEODETIC COURSE (WORD 2)																

The bit designation shall be as follows:

DESCRIPTION: 32-BIT BAM (SEE TABLE IV-III) - NAVY SHIP ONLY
 MSB: -180
 LSB: $180 \times 2^{**}(-31)$
 UNITS: DEGREES
 RANGE: -180 TO +180-LSB
 VALIDITY: SPECIFIED BY NAV VALIDITY IN WORD 1
 NOTE: TRUE NORTH IS 0. POSITIVE IS CLOCKWISE

80.1.4.8.2.6.2.10 Terminal Output Message 30 Words 15-16

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 15	RELATIVE LATITUDE (WORD 1)																
wd 16	RELATIVE LATITUDE (WORD 2)																

The bit designation shall be as follows:

FORMAT IS THE SAME AS GEODETIC LATITUDE (WORDS 3-4)

VALIDITY: SPECIFIED BY NAV VALIDITY IN WORD 1

NOTE: IF THE TERMINAL IS NAVY AIR AND THE DATA TYPE IN WORD 1 INDICATES CORRECTION DATA, THEN THIS FIELD IS JTIDS RELATIVE LATITUDE MINUS HOST PLATFORM LATITUDE. OTHERWISE, THE DATA IS ABSOLUTE AND SOUTH IS NEGATIVE.

TERMINAL OUTPUT MESSAGE 30

80.1.4.8.2.6.2.11 Terminal Output Message 30 Words 17-18

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 17	RELATIVE LONGITUDE (WORD 1)																
wd 18	RELATIVE LONGITUDE (WORD 2)																

The bit designation shall be as follows:

FORMAT IS SAME AS GEODETIC LONGITUDE (WORDS 5-6)

VALIDITY: SPECIFIED BY NAV VALIDITY IN WORD 1

NOTE: IF THE TERMINAL IS NAVY AIR AND THE DATA TYPE IN WORD 1 INDICATES CORRECTION DATA, THEN THIS FIELD IS JTIDS RELATIVE LONGITUDE MINUS HOST PLATFORM LONGITUDE. OTHERWISE, THE DATA IS ABSOLUTE AND WEST IS NEGATIVE.

80.1.4.8.2.6.2.12 Terminal Output Message 30 Words 19-20

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 19	RELATIVE NORTH VELOCITY (WORD 1)																
wd 20	RELATIVE NORTH VELOCITY (WORD 2)																

The bit designation shall be as follows:

DESCRIPTION: 32-BIT TWO'S COMPLEMENT

MSB: -4,096

LSB: $2^{**}(-19)$

UNITS: FEET/SEC

RANGE: -4,096 TO +4,096-LSB

VALIDITY: SPECIFIED BY NAV VALIDITY IN WORD 1

NOTE: SOUTH IS NEGATIVE

TERMINAL OUTPUT MESSAGE 30

80.1.4.8.2.6.2.13 Terminal Output Message 30 Words 21-22

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 21	RELATIVE EAST VELOCITY (WORD 1)																
wd 22	RELATIVE EAST VELOCITY (WORD 2)																

The bit designation shall be as follows:

FORMAT AND VALIDITY ARE SAME AS RELATIVE NORTH VELOCITY (WORDS 19-20)

NOTE: WEST IS NEGATIVE

80.1.4.8.2.6.2.14 Terminal Output Message 30 Words 23-24

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 23	RELATIVE ALTITUDE (WORD 1)																
wd 24	RELATIVE ALTITUDE (WORD 2)																

The bit designation shall be as follows:

DESCRIPTION: 32-BIT TWO'S COMPLEMENT

MSB: -131,072

LSB: $2^{**}(-14)$

UNITS: FEET

RANGE: -131,072 TO +131,072-LSB

VALIDITY: SPECIFIED BY NAV VALIDITY IN WORD 1

NOTE: IF THE TERMINAL IS NAVY AIR AND THE DATA TYPE IN WORD 1 INDICATES CORRECTION DATA, THEN THIS FIELD IS JTIDS ALTITUDE MINUS HOST PLATFORM ALTITUDE. OTHERWISE, DATA IS ABSOLUTE AND DOWN IS NEGATIVE.

TERMINAL OUTPUT MESSAGE 30

80.1.4.8.2.6.2.15 Terminal Output Message 30 Words 25-26

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 25	RELATIVE AZIMUTH CORRECTION (WORD 1)																
wd 26	RELATIVE AZIMUTH CORRECTION (WORD 2)																

The bit designation shall be as follows:

FORMAT IS SAME AS GEODETIC LATITUDE (WORDS 3-4)

VALIDITY: VALID IF NAV VALIDITY IN WORD 1 INDICATES GEODETIC QUANTITIES VALID AND DATA TYPE IN WORD 1 IS SET TO CORRECTION DATA (AIR ONLY), OR JTIDS NAV SYSTEM TYPE IN WORD 1 IS SET TO INERTIAL OR NON-INERTIAL (SHIP ONLY).

NOTE: TERMINAL'S ESTIMATE OF NEEDED GEODETIC AZIMUTH CORRECTION, MAKING USE OF RELATIVE GRID DATA. POSITIVE CLOCKWISE FROM PLATFORM NORTH AXIS TO REFERENCE NORTH AXIS.

80.1.4.8.2.6.2.16 Terminal Output Message 30 Words 27-28

NAVY SHIP ONLY

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 27	RELATIVE COURSE (WORD 1)																
wd 28	RELATIVE COURSE (WORD 2)																

The bit designation shall be as follows:

DESCRIPTION: 32-BIT BAM (SEE TABLE IV-III) - NAVY SHIP ONLY

MSB: -180

LSB: $180 \times 2^{**}(-31)$

UNITS: DEGREES

RANGE: -180 TO +180-LSB

VALIDITY: SPECIFIED BY NAV VALIDITY IN WORD 1

NOTE: CLOCKWISE IS POSITIVE. NORTH (V AXIS) = 0.

TERMINAL OUTPUT MESSAGE 30

80.1.4.8.2.6.2.17 Terminal Output Message 30 Word 29

MSB									LSB						
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Q _{PG}				Q _{VG}					Q _{AG}			Q _H			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-3	ALTITUDE QUALITY (Q_h) - <u>NAVY AIR ONLY</u> 0: UNCERTAINTY IS GREATER THAN 18,080.0 FEET. 1 - 15: SEE TABLE IV-IV
4-6	GEODETTIC AZIMUTH QUALITY (Q_{AG})

QUALITY LEVEL	AZIMUTH UNCERTAINTY (σ_{AG}) (milliradians)
7	#1
6	#2
5	#4
4	#8
3	
2	#16
1	#32
0	#64
	>64

7	SPARE
8-11	GEODETTIC HORIZONTAL VELOCITY QUALITY (Q_{VG}) 0 : UNCERTAINTY IS GREATER THAN 10.0 FEET PER SECOND (FPS) 1-15 : REPORTED VALUE IS THE GREATEST NUMBER FOR WHICH 10.0 x 2**(0.5- Q_{VG} /2) FPS IS GREATER THAN THE GEODETTIC HORIZONTAL VELOCITY UNCERTAINTY (σ_{VG})
12-15	GEODETTIC HORIZONTAL POSITION QUALITY (Q_{PG}) SEE TABLE IV-IV FOR A DESCRIPTION OF THE VALUES.

80.1.4.8.2.6.2.18 Terminal Output Message 30 Word 30

MSB								LSB							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Q_{PR}				Q_{VR}					Q_{AR}						

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-3	SPARE
4-6	RELATIVE AZIMUTH QUALITY (Q_{AR}) SEE TABLE IV-IV FOR A DESCRIPTION OF THE VALUES.
7	SPARE
8-11	RELATIVE HORIZONTAL VELOCITY QUALITY (Q_{VR}) DERIVED FROM RELATIVE HORIZONTAL VELOCITY UNCERTAINTY (σ_{VR}) WITH SAME DEFINITION AS FOR GEODETIC HORIZONTAL VELOCITY QUALITY (Q_{VG}).
12-15	RELATIVE HORIZONTAL POSITION QUALITY (Q_{PR}) SEE TABLE IV-IV FOR A DESCRIPTION OF THE VALUES.

80.1.4.8.2.6.2.19 Terminal Output Message 30 Word 31-32NAVY AIR ONLY

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 31	TIME OF COMPUTATION -- JTIDS (WORD 1)															
wd 32	TIME OF COMPUTATION -- JTIDS (WORD 2)															

The bit designation shall be as follows:

DESCRIPTION: 32-BIT SCALED BINARY - NAVY AIR ONLY

MSB: $6.87 \times 10^{**4}$

LSB: $32 \times 10^{**(-6)}$

UNITS: SECONDS

RANGE: 0 TO APPROXIMATELY 137,439

VALIDITY: VALID ONLY IF OFFSET VALIDITY (OV) BIT OF
INITIALIZATION BLOCK 56, WORD 17, IS SET TO 0 AND DATA TYPE IN
WORD 1 BEING SET TO CORRECTION DATA.

NOTE: TIME IS EQUAL TO THE TIME OF COMPUTATION -- VELOCITY
FROM TIM 17 WORDS 16 - 17, OF CORRESPONDING PLATFORM NAV DATA.

80.1.4.8.2.6.3 Status Word. See 80.1.4.8.2.1.3

TERMINAL OUTPUT MESSAGE 30

80.1.5 Global Memory Address Allocation

80.1.5.1 Fixed Address Memory. For convenience, certain Terminal function/Status words in Global Memory are assigned to fixed locations. These Global Memory Fixed Addresses shall be as specified in Table VIII-IV and include addresses 0000 through 0FFF and 1DF8 through 1FFF. Volatile Global Memory includes words at addresses 0000 through 0FFF (Hexadecimal).

Addresses 0040-0062 (Hex), addresses 007A-007D (Hex), addresses 0146-014A (Hex), addresses 0160-0177 (Hex), addresses 0179-0182 (Hex), and addresses 0340-05E2 (Hex) are controlled by the NICP.

Addresses 0000 through 0FFF (Hexadecimal), excluding the addresses under NICP control and the Global Memory Fixed Addresses, are under SICP control.

TABLE VIII-IV. GLOBAL MEMORY ADDRESS ALLOCATION FOR
FIXED ADDRESS MEMORY

ADDRESS LOCATION	WORD GROUP			NO. OF WORDS
	COMMON	NAVY AIR	NAVY SHIP	
PTB (HEX)				
0000 TO 001F	MUX RECEIVE STARTING ADDRESS LOCATION	-	-	32
0020 TO 003F	MUX TRANSMIT STARTING ADDRESS LOCATION	-	-	32
0040 TO 0062	NICP TO PTP DATA TRANSFER	-	-	35
0063 TO 0074	PTP TO NICP DATA TRANSFER	-	-	18
0075 TO 0079	NICP TO SICP DTB STARTING ADDRESS LOCATION	-	-	5
007A	NICP DTB WORD COUNT WORD	-	-	1
007B AND 007C	NICP-PTP MAILBOX WORDS	-	-	2
007D AND 007E	NICP-SICP MAILBOX WORDS	-	-	2
007F	SICP MAILBOX FAIL WORD	-	-	1

TABLE VIII-IV. GLOBAL MEMORY ADDRESS ALLOCATION FOR
FIXED ADDRESS MEMORY (CONTINUED)

ADDRESS LOCATION	WORD GROUP			NO. OF WORDS
PTB (HEX)	COMMON	NAVY AIR	NAVY SHIP	
0080 TO 0087	VOICE BUFFER STARTING ADDRESS LOCATIONS	-	-	8
0088	VOICE BIT WORD	-	-	1
0089	NOT USED	-	-	1
008A	MUX SELF-TEST WORD	-	-	1
008B	MUX CONTROL WORD	-	-	1
008C	MUX BIT WORD	-	-	1
008D	MUX MAILBOX 1	-	-	1
008E	MUX MAILBOX 2	-	-	1
008F	SPARE	-	-	1
0090 TO 0093	-	TAILORED INTERFACE OUTPUT WORDS	SRA BIT INTERFACE WORDS	4
0094	-	TAILORED I/O FIRMWARE VER.	-	1
0095	INPUT STATUS DISCRETE WD 1	-	-	1
0096	INPUT DISCRETE WD 2	-	-	1
0097	INPUT DISCRETE WD 3	-	-	1
0098	-	INPUT DISCRETE WD 4	INPUT BIT WD 1	1
0099	-	INPUT STATUS DISCRETE WD 5	INPUT BIT WD 2	1

TABLE VIII-IV. GLOBAL MEMORY ADDRESS ALLOCATION FOR
FIXED ADDRESS MEMORY (CONTINUED)

ADDRESS LOCATION	WORD GROUP			NO. OF WORDS
PTB (HEX)	COMMON	NAVY AIR	NAVY SHIP	
009A	-	TAILORED INTERFACE MAILBOX WORD	INPUT BIT WD 3	1
009B	-	TAILORED I/O BIT SUMMARY WORD	INPUT BIT WD 4	1
009C	-	TACAN BIT DIAGNOSTICS WORD	INPUT BIT WD 5	1
009D	-	SPARE	BIT SUMMARY WORD	1
009E	-	TAILORED INTERFACE SELF-TEST WORD	SPARE INPUT BIT WORD	1
009F	SPARE	-	-	1
00A0 TO 00AF	-	TACAN INPUT WORDS	SPARE	16
00B0 TO 00B3	-	TACAN OUTPUT WORDS	SPARE	4
00B4	-	RESERVED FOR TACAN TEST	SPARE	1
00B5	VOICE PORT 1 TEST WORD	-	-	1
00B6	VOICE PORT 2 TEST WORD	-	-	1

TABLE VIII-IV. GLOBAL MEMORY ADDRESS ALLOCATION FOR
FIXED ADDRESS MEMORY (CONTINUED)

ADDRESS LOCATION	WORD GROUP			NO. OF WORDS
PTB (HEX)	COMMON	NAVY AIR	NAVY SHIP	
00B7 TO 00B9	RESERVED FOR TEST	-	-	3
00BA TO 00D9	SACP INPUT BUFFER	-	-	32
00DA	SACP INPUT STATUS WORD	-	-	1
00DB	SACP OUTPUT STATUS WORD	-	-	1
00DC TO 00FB	SACP OUTPUT BUFFER	-	-	32
00FC AND 00FD	TSRD STARTING ADDRESS WORDS	-	-	1
00FE	RESERVED FOR TSRD TEST WORD	-	-	1
00FF	NOT USED	-	-	1
0100 TO 011F	MUX RECEIVE STATUS/ VALIDITY WORDS	-	-	32
0120 TO 013F	NOT USED	-	-	32
0140 TO 0144	SICP TO NICP DTB STARTING ADDRESS LOCATIONS	-	-	5
0145	SICP TIME LOADING (SITL)	-	-	1

TABLE VIII-IV. GLOBAL MEMORY ADDRESS ALLOCATION FOR
FIXED ADDRESS MEMORY (CONTINUED)

ADDRESS LOCATION	WORD GROUP			NO. OF WORDS
	COMMON	NAVY AIR	NAVY SHIP	
PTB (HEX)				
0146 TO 0149	RESERVED FOR NICP TESTING (CHRONOMETER INTERFACE)	-	-	4
014A	RESERVED FOR NICP TESTING (RTB INTERFACE)	-	-	1
014B TO 0154	RESERVED FOR TERMINAL TESTING	-	-	10
0155	-	RESERVED FOR ASN/CB/TSO TESTING	NOT USED	1
0156	RESERVED FOR TERMINAL TESTING	-	-	1
0157	OTAR AND VOLTR	-	-	1
0158	PTP VERSION NUMBER	-	-	1
0159	CTP VERSION NUMBER	-	-	1
015A TO 015F	NOT USED	-	-	6
0160	NICP TIME LOADING (NITL)	-	-	1
0161	NUMBER OF RECEIVED MESSAGES	-	-	1
0162	NUMBER OF TRANSMIT MESSAGES	-	-	1

TABLE VIII-IV. GLOBAL MEMORY ADDRESS ALLOCATION FOR
FIXED ADDRESS MEMORY (CONTINUED)

ADDRESS LOCATION	WORD GROUP			NO. OF WORDS
	COMMON	NAVY AIR	NAVY SHIP	
PTB (HEX)				
0163	NUMBER OF TOTAL MESSAGES	-	-	1
0164	NUMBER OF NICP BUSIES WHEN RCVD MSG	-	-	1
0165	NOT USED	-	-	1

NOTE: ADDRESS 0163 IS A SUM OF THE VALUES OF 0161 AND 0162, THAT IS UPDATED EVERY 12 SECONDS BY THE SICP.

TABLE VIII-IV. GLOBAL MEMORY ADDRESS ALLOCATION FOR
FIXED ADDRESS MEMORY (CONTINUED)

ADDRESS LOCATION	WORD GROUP			NO. OF WORDS
	COMMON	NAVY AIR	NAVY SHIP	
PTB (HEX)				
0166	NOT USED	-	-	1
0167	NUMBER OF RELAY BUSY	-	-	1
0168	NICP DECLARED FINE SYNC	-	-	1
0169	NUMBER OF PULSE WIDTH IPF ALARMS	-	-	1
016A	NUMBER OF 1030/1090 MONITOR IPF ALARMS	-	-	1
016B	NUMBER OF OUT OF BOUNDS IPF ALARMS	-	-	1
016C	NUMBER OF FREQUENCY COUNTER IPF ALARMS	-	-	1
016D	NUMBER OF HISTOGRAM IPF ALARMS	-	-	1
016E AND 016F	SPARE	-	-	2
0170	NUMBER OF RECEIVED MESSAGES	-	-	1
0171	NUMBER OF TRANSMIT MESSAGES	-	-	1
0172	NICP BUSIES WHEN RCVD MSG	-	-	1
0173	NOT USED	-	-	1

NOTE: ADDRESS LOCATIONS 0170 THROUGH 017B ARE UPDATED AND
VALID AT 12 SECOND BOUNDARIES.

TABLE VIII-IV. GLOBAL MEMORY ADDRESS ALLOCATION FOR
FIXED ADDRESS MEMORY (CONTINUED)

ADDRESS LOCATION	WORD GROUP			NO. OF WORDS
	COMMON	NAVY AIR	NAVY SHIP	
PTB (HEX)				
0174	NOT USED	-	-	1
0175	NUMBER OF RELAY BUSY	-	-	1
0176	TIME OF DAY (TOD) WORD 1	-	-	1
0177	TIME OF DAY (TOD) WORD 2	-	-	1
0178	SICP TIME LOADING (SITL)	-	-	1
0179	NICP TIME LOADING (NITL)	-	-	1
017A	NUMBER OF NICP BUSIES	-	-	1
017B	NUMBER OF SICP TO NICP MESSAGES	-	-	1
017C TO 017F	NOT USED	-	-	4
0180	NUMBER OF TIME OVERLOAD INDICATIONS (NICP)	-	-	1
0181 AND 0182	RESERVED FOR NICP TERMINAL TESTING AT IF	-	-	2
0183 TO 01EF	NOT USED	-	-	109

NOTE: ADDRESS LOCATIONS 0170 THROUGH 017B ARE UPDATED AND
VALID AT 12 SECOND BOUNDARIES.

TABLE VIII-IV. GLOBAL MEMORY ADDRESS ALLOCATION FOR
FIXED ADDRESS MEMORY (CONTINUED)

ADDRESS LOCATION	WORD GROUP			NO. OF WORDS
PTB (HEX)	COMMON	NAVY AIR	NAVY SHIP	
01F0	NICP CHECKSUM	-	-	1
01F1	NICP VERSION NUMBER	-	-	1
01F2	SICP CHECKSUM	-	-	1
01F3	RESERVED FOR GROWTH	-	-	1
01F4	SICP EXTERNAL VERSION NUMBER	-	-	1
01F5	SICP INTERNAL VERSION NUMBER	-	-	1
01F6	RESERVED FOR GROWTH	-	-	1
01F7	MUX FIRMWARE VERSION	-	-	1
01F8	VOICE CONTROLLER VERSION	-	-	1
01F9 TO 01FF	SPARE	-	-	7

TABLE VIII-IV. GLOBAL MEMORY ADDRESS ALLOCATION FOR
FIXED ADDRESS MEMORY (CONTINUED)

ADDRESS LOCATION	WORD GROUP			NO. OF WORDS
	COMMON	NAVY AIR	NAVY SHIP	
PTB (HEX)				
0200 TO 0FFF	NOT USED	-	-	3584
1DF8 TO 1DFB	CHRONOMETER (PORT-TO- PORT)	-	-	4
1DFC TO 1F2F	NOT USED	-	-	308
1F30 TO 1F3F	CPU CSS WORDS (PORT-TO- PORT)	-	-	16
1F40 TO 1F7F	NOT USED	-	-	64
1F80	-	TAILORED OUTPUT PORT WORD	-	1
1F81 TO 1FEF	NOT USED	-	-	111
1FF0	READ GPS 1	-	-	1
1FF1	READ GPS 2	-	-	1
1FF2	READ SLOT DIVIDER (TIME TAG)	-	-	1
1FF3	NET ENTRY	-	-	1
1FF4	REFERENCE TIME BASE FREQUENCY CORRECTION	-	-	1
1FF5	SPARE	-	-	1

TABLE VIII-IV. GLOBAL MEMORY ADDRESS ALLOCATION FOR
FIXED ADDRESS MEMORY (CONTINUED)

ADDRESS LOCATION	WORD GROUP			NO. OF WORDS
	COMMON	NAVY AIR	NAVY SHIP	
PTB (HEX)				
1FF6	LOAD SLOT CTR	-	-	1
1FF7	LOAD TIME CORRECTION DOWN COUNTER	-	-	1
1FF8 TO 1FFF	SPARE	-	-	8

80.1.5.2 Non-Volatile RAM. The memory address locations for Global Memory non-volatile RAM shall be as specified in Table VIII-V.

TABLE VIII-V. GLOBAL MEMORY ADDRESS ALLOCATION
FOR NON-VOLATILE RAM

ADDRESS LOCATION	WORD GROUP	NO. OF WORDS
PTB (HEX)	NAVY AIR / NAVY SHIP	
1000 TO 1100	NOT USED	257
1101 TO 11C9	POWER SHUTDOWN NICP	201
11CA TO 11DC	BIT INFORMATION	19
11DD TO 12A1	POWER SHUTDOWN SICP	197
12A2 TO 1AA1	INITIALIZATION DATA	2048
1AA2 TO 1AFF	NOT USED	94
1B00 TO 1BFF	CSS	256

80.1.6 Navy Shipboard and Navy Airborne Usage of Appendix VIII

80.1.6.1 Scope. This appendix details the interfaces that are common for the Navy Shipboard and Navy Airborne Host IUs. The following are the common IU interfaces:

- a. Digital Voice Port
- b. TACAN Port (F-14D and E-2C)
- c. Support Port

80.1.6.1.1 Digital Voice Port Interface. The Digital Voice Port shall interface with the SICP via Global Memory. The SICP shall provide two groups of voice port starting address locations (one group for each voice port). Each group shall consist of four starting addresses which shall be used by that Digital Voice Port for writing or reading digital voice messages into the corresponding buffer in Global Memory (two for encoding and two for decoding). The starting location for each voice port starting address group shall be 0080₁₆ for Voice Port 1 and 0084₁₆ for Voice Port 2. Both voice ports operate at a 16 k bit/second digital voice rate. The SICP shall supply buffers that have a length of 450 bits.

The buffer composition of the 450-bit message is shown in Figure VIII-IV. The format for the voice port starting addresses shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION
SB	PTT				ADDRESS A ₁ ENCODE											0080 ₁₆
SB	PTT				ADDRESS B ₁ ENCODE											0081 ₁₆
SB	BLB				ADDRESS C ₁ DECODE											0082 ₁₆
SB	BLB				ADDRESS D ₁ DECODE											0083 ₁₆
SB	PTT				ADDRESS A ₂ ENCODE											0084 ₁₆
SB	PTT				ADDRESS B ₂ ENCODE											0085 ₁₆
SB				ADDRESS C ₂ DECODE											0086 ₁₆	
SB				ADDRESS D ₂ DECODE											0087 ₁₆	
RESERVED FOR VOICE BIT - CURRENTLY NOT USED																0088 ₁₆

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	15											0				
wd 2	31											16				
wd 3	47											32				
wd 4	63											48				
wd 5	79											64				
wd 6	95											80				
wd 7	111											96				
wd 8	127											112				
wd 9	143											128				
wd 10	159											144				
wd 11	175											160				
wd 12	191											176				
wd 13	207											192				
wd 14	223											208				
wd 15	239											224				
wd 16	255											240				
wd 17	271											256				
wd 18	287											272				
wd 19	303											288				
wd 20	319											304				
wd 21	335											320				
wd 22	351											336				
wd 23	367											352				
wd 24	383											368				
wd 25	399											384				
wd 26	415											400				
wd 27	431											416				
wd 28	447											432				
wd 29														449	448	

WORD 1, BIT 0 (BIT 0) IS THE 1ST BIT OF DIGITAL VOICE MESSAGE
WORD 29, BIT 1 (BIT 449) IS THE LAST BIT OF DIGITAL VOICE
MESSAGE

FIGURE VIII-IV. 450 BIT DIGITAL VOICE BUFFER

The bit designation shall be as follows:

VOICE PORT 1 ADDRESS ENCODE (TRANSMIT)

BIT DESIGNATION

0-10	ENCODE BUFFER STARTING ADDRESS (11 LSBs OF 13 BIT GM ADDRESS -2 MSBs FIXED AS ZERO)
11-13	NOT USED
14	LOGIC 1 = PTT IS PRESENT (ADDITIONAL BUFFER IS TO BE FILLED)
15	BUFFER STATUS BIT LOGIC 0 = BUFFER HAS BEEN FILLED LOGIC 1 = BUFFER ADDRESS IS VALID

VOICE PORT 1 ADDRESS DECODE (RECEIVE)

BIT DESIGNATION

0-10	DECODE BUFFER STARTING ADDRESS (11 LSBs OF 13 BIT GM ADDRESS -2 MSBs FIXED AS ZERO)
11-13	NOT USED BY NAVY
14	BUFFER LENGTH BIT (BLB) LOGIC 1 = BUFFER IS 450 BITS (29 WORDS) LOGIC 0 = NOT USED BY NAVY
15	BUFFER STATUS BIT LOGIC 1 = BUFFER HAS BEEN FILLED

VOICE PORT 2 ADDRESS ENCODE (TRANSMIT)BIT DESIGNATION

0-10	ENCODE BUFFER STARTING ADDRESS (11 LSBs OF 13 BIT GM ADDRESS -2 MSBs FIXED AS ZERO)
11-13	NOT USED
14	PUSH-TO-TALK (PTT) LOGIC 1 = PTT IS PRESENT (ADDITIONAL BUFFER TO BE FILLED)
15	BUFFER STATUS BIT LOGIC 1 = BUFFER ADDRESS IS VALID LOGIC 0 = BUFFER HAS BEEN FILLED

VOICE PORT 2 ADDRESS DECODE (RECEIVE)BIT DESIGNATION

0-10	DECODE BUFFER STARTING ADDRESS (11 LSBs OF 13 BIT GM ADDRESS -2 MSBs FIXED AS ZERO)
11-14	NOT USED
15	BUFFER STATUS BIT LOGIC 1 = BUFFER HAS BEEN FILLED

80.1.6.1.1.1 Digital Voice Message Transmission. The SICP, prior to setting the Port Access Bit to LOGIC 1 (refer to 3.2.2) shall set the status bit in all the digital port starting address words to zero (refer to 80.1.6.1.1). When the SICP is ready to accept digital voice transmissions, it shall set the encode starting address status bits to a LOGIC 1.

80.1.6.1.1.1.1 Digital Voice Port Operation. The Digital Voice Port shall, upon receipt of a Push-To-Talk (PTT) command, obtain from Global Memory the encode starting address word A. If the status bit is set to LOGIC 1, then the Digital Voice Port shall start loading the "A" encode buffer. After the encode "A" buffer has been filled, the Digital Voice Port shall set the encode "A" status bit (bit 15) to LOGIC 0. This shall indicate to the SICP that buffer "A" has been filled and that the digital

voice message is ready for transmission. In addition, the voice port shall set the PTT (Bit 14) to LOGIC 1 if the PTT is still present. During the process of setting bits 14 and 15, the remaining 14 bits of the starting address word may be altered by the Digital Voice Port. The SICP, upon reading the filled encode buffer, shall set the status bit of the encode starting address word to LOGIC 1 in addition to loading the starting address of the new "A" encode buffer.

80.1.6.1.1.1.2 PTT Command Removal. If the PTT command is still present upon completion of filling buffer A, the Digital Voice Port shall set the PTT bit (Bit 14) of the encode starting address word to LOGIC 1 and then obtain from Global Memory the starting address location for the "B" encode buffer. The Voice Port shall then fill buffer "B" with the digital voice bit stream information in the same manner as buffer "A". Upon completing the fill of buffer "B" and if the PTT Command is still present, the process shall be repeated using buffer A. This process shall continue until the PTT Command is removed. The Digital Voice Port shall then switch over to the digital voice reception routine.

80.1.6.1.1.2 Digital Voice Message Reception. The SICP, upon receipt of a Digital Voice Message from the NICP, shall store the received message in the "C" decode digital voice buffer. The SICP shall then set the buffer status bit (bit 15 of the "C" decode buffer starting address word) to LOGIC 1. If a packed-2 Digital Voice Message has been received, the SICP shall store the first part of the message in the "C" buffer and the second part in the "D" buffer. For a packed-4 message the SICP shall alternate between the "C" and "D" decode buffers when storing the four parts of this message.

If no PTT Command is being received, the Digital Voice Port shall obtain from Global Memory the "C" buffer starting address. The Digital Voice Port shall check the buffer status bit. If the buffer status bit is set to LOGIC 1, then the received message is located in the "C" buffer. If the buffer status bit is set to LOGIC 0, then no digital voice message is available for decoding. In this case the silence pattern shall be decoded. When a valid buffer of digital voice data is found, the Digital Voice Port shall retrieve the message word-by-word from Global Memory, and shall serially decode the message. After a buffer of digital voice data has been read, the Digital Voice Port shall reset the appropriate decode starting address status bit to LOGIC 0, which indicates to the SICP that the buffer may be loaded again. During the decoding of the last full word in the buffer, the starting address word for decode buffer "D" shall be checked by the Digital Voice Port to see if another buffer of voice data is available. Buffers of data

shall be decoded alternately (C, D, C, D...) until no data is available or the PTT command changes to a LOGIC 1.

80.1.6.1.1.3 Voice Port Test Words. The SICP shall provide two words in Global Memory which shall be used to verify that Voice Ports 1 and 2 are operational. Each Voice Port shall write its corresponding Voice Port Test Word consisting of a bit pattern of AAAA₁₆ into Global Memory every 100 slots (approximately 780 milliseconds). These words shall be read by the SICP (approximately every 200 slots) and shall be set to zero by the SICP after being read. The format of the Voice Port Test Words shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION
VOICE PORT 1 TEST WORD																00B5 ₁₆
VOICE PORT 2 TEST WORD																00B6 ₁₆

The bit designation shall be as follows:

WORD 1 00B5₁₆

<u>BIT</u>	<u>DESIGNATION</u>
0-15	SET TO AAAA ₁₆ BY VOICE PORT 1 SET TO 0000 ₁₆ BY SICP

WORD 2 00B6₁₆

<u>BIT</u>	<u>DESIGNATION</u>
0-15	SET TO AAAA ₁₆ BY VOICE PORT 2 SET TO 0000 ₁₆ BY SICP

80.1.6.1.2 TACAN Port Interface. The TACAN Port shall provide the interface between the Host avionics and the terminal R/T and DDP. The interface with the DDP shall be via Global Memory utilizing the Plain Text Bus. The following TACAN port data word interfaces shall be provided in Global Memory:

- a. 16 TACAN data input words from the TACAN port.
- b. 4 TACAN control output words from the SICP to the TACAN port.

During normal operations, the control of the terminal's TACAN function shall be provided from the Host and transmitted to the R/T via a 500 kHz serial channel. Under the conditions when the normal interface to the Host is not connected or the TACAN channel selected is zero, the TACAN port shall utilize the TACAN control outputs from the SICP if available and transmit these commands to the R/T. In TACAN-only emergency operation, no IU to Global Memory transactions are possible or required. The TACAN I/O within the IU will receive control data from the Host, range and bearing information from the R/T and control the Host indicators and displays accordingly.

80.1.6.1.2.1 TACAN Data Input Words. The TACAN port shall write the following group of TACAN Data Input Words into Global Memory when this information is received by the TACAN port from the R/T:

- a. Range (binary)
- b. Bearing (binary)
- c. Mode/Channel Feedback
- d. Func Status
- e. Bearing (BAM)
- f. Odometer Units
- g. Odometer Tens
- h. Odometer Hundreds
- i. Bearing SIN ($\theta + 60B$)
- j. Bearing SIN ($\theta - 60B$)
- k. Spare
- l. Spare
- m. Range Rate
- n. Bearing Rate
- o. BIT Summary
- p. Spare

NOTE: The first 15 words shall be identical to that received from the R/T less labels. The sixteenth word shall be a spare.

These 16 words shall be stored in contiguous locations in Global Memory. The starting location shall be 00A0₁₆.

80.1.6.1.2.1.1 Range (Binary) Word. The format of the Range (Binary) Word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00A0 ₁₆
RANGE (BINARY)															R I V	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	RANGE WORD INVALID BIT (RIV) LOGIC 1 = RANGE WORD INVALID
1-15	TACAN RANGE LSB: 0.0125 NM MSB: 204.8 NM

80.1.6.1.2.1.2 Bearing (Binary) Word. The format of the Bearing (Binary) Word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00A1 ₁₆
BEARING (BINARY)															A N T	B I V

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	BEARING WORD INVALID BIT (BIV) LOGIC 1 = BEARING WORD INVALID
1	TACAN ANTENNA SELECT (ANT) LOGIC 1 = ANTENNA A LOGIC 0 = ANTENNA B
2-15	TACAN BEARING LSB: 0.03125 DEGREES MSB: 256 DEGREES

80.1.6.1.2.1.3 Mode/Channel Feedback Word. The format of the Mode/Channel Feedback Word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00A2 ₁₆
R V	B V	MODE				CHANNEL								0	0	
		A / A	R E C	T / R	X / Y	TENS-HUN				UNITS						
						80	40	20	10	8	4	2	1			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-1	SET TO LOGIC 0
2-9	TACAN CHANNEL NUMBER (0 TO 126)
10	X/Y MODE (X/Y) LOGIC 1 = X MODE LOGIC 0 = Y MODE
11-12	12 • 11 •••••• 1 • 0 RECEIVE MODE 0 • 1 TRANSMIT/RECEIVE (T/R) MODE 1 • 1 NOT USED 0 • 0 NOT USED
13	A/A MODE (A/A) LOGIC 1 = AIR-TO-AIR MODE LOGIC 0 = GROUND/AIR MODE
14	BEARING VALID (BV) LOGIC 1 = BEARING VALID
15	RANGE VALID (RV) LOGIC 1 = RANGE VALID

80.1.6.1.2.1.4 Function Status Word. The format of the Function Status Word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00A3 ₁₆
0	0	AGC								DME		BEARING				
		S / T	(BINARY)							S / T	M E M	S / T	1 5	1 3 5	M E M	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	BEARING IN MEMORY (MEM) LOGIC 1 = BEARING IN MEMORY
1	LOGIC 1 = BEARING 135 Hz MOD PRESENT
2	LOGIC 1 = BEARING 15 Hz MOD PRESENT
3	BEARING SEARCH/TRACK (S/T) LOGIC 1 = BEARING IN SEARCH LOGIC 0 = BEARING IN TRACK
4	DME IN MEMORY (MEM) LOGIC 1 = DME IN MEMORY
5	DME SEARCH/TRACK (S/T) LOGIC 1 = DME IN SEARCH LOGIC 0 = DME IN TRACK
6-12	AGC (BINARY) LSB = 8V/128
13	AGC SEARCH/TRACK LOGIC 1 = AGC IN SEARCH LOGIC 0 = AGC IN TRACK
14-15	SET TO LOGIC 0

80.1.6.1.2.1.5 Bearing (BAM) Word. The format of the Bearing (BAM) word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00A4 ₁₆
BEARING (BAM)														A N T	B I V	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	BEARING WORD INVALID (BIV) LOGIC 1 = BEARING WORD INVALID
1	TACAN ANTENNA SELECTED (ANT) LOGIC 1 = ANTENNA A LOGIC 0 = ANTENNA B
2	NOT USED
3-15	TACAN BEARING (BAM) LSB = $\pi \times 2^{**}(-12)$ (SEE TABLE IV-III)

80.1.6.1.2.1.6 Odometer Units Word. The format of the Odometer Units Word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00A5 ₁₆
SIN (θ + 60B)								SIN (θ - 60B)								

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-7	ODOMETER UNITS-GENEVA SIN ($\theta - 60B$) IN 2'S COMPLEMENT LSB = 1/128
8-15	ODOMETER UNITS-GENEVA SIN ($\theta + 60B$) IN 2'S COMPLEMENT LSB = 1/128

80.1.6.1.2.1.7 Odometer Tens Word. The format of the Odometer Tens Word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00A6 ₁₆
SIN (θ + 60B)								SIN (θ - 60B)								

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-7	ODOMETER TENS-GENEVA SIN ($\theta - 60B$) IN 2'S COMPLEMENT LSB = 1/128
8-15	ODOMETER TENS-GENEVA SIN ($\theta + 60B$) IN 2'S COMPLEMENT LSB = 1/128

80.1.6.1.2.1.8 Odometer Hundreds Word. The format of the Odometer Hundreds Word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00A7 ₁₆
SIN (θ + 60B)								SIN (θ - 60B)								

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-7	ODOMETER HUNDREDS-GENEVA SIN ($\theta - 60B$) IN 2'S COMPLEMENT LSB = 1/128
8-15	ODOMETER HUNDREDS-GENEVA SIN ($\theta + 60B$) IN 2'S COMPLEMENT LSB = 1/128

80.1.6.1.2.1.9 Bearing Sin ($\theta + 60B$). The format of the Bearing Sin ($\theta + 60B$) Word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00A8 ₁₆
SIN (θ + 60B)																

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-2	NOT USED
3-15	BEARING SIN ($\theta + 60B$) IN 2'S COMPLEMENT LSB = 1/4096

80.1.6.1.2.1.10 Bearing Sin ($\theta - 60B$). The format of the Bearing Sin ($\theta - 60B$) Word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00A9 ₁₆
SIN (θ - 60B)																

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-2	NOT USED
3-15	BEARING SIN ($\theta - 60B$) IN 2'S COMPLEMENT LSB = 1/4096

80.1.6.1.2.1.11 Spare TACAN Word. ADDRESS LOCATION 00AA₁₆

80.1.6.1.2.1.12 Spare TACAN Word. ADDRESS LOCATION 00AB₁₆

80.1.6.1.2.1.13 Range Rate Word. The format of the Range Rate Word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00AC ₁₆
M S B	0	RANGE RATE													R R I V	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	RANGE RATE WORD INVALID (RRIV) LOGIC 1 = RANGE RATE WORD INVALID
1-13	RANGE RATE IN 2'S COMPLEMENT MSB IS LOCATED IN BIT 15 LSB = 1 KNOT
14	SET TO LOGIC 0
15	MSB OF RANGE RATE

80.1.6.1.2.1.14 Bearing Rate Word. The format of the Bearing Rate Word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00AD ₁₆
M S B	0	BEARING RATE													B R I V	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	BEARING RATE WORD INVALID (BRIV) LOGIC 1 = BEARING WORD INVALID
1-13	BEARING RATE IN 2'S COMPLEMENTS MSB IS LOCATED IN BIT 15 LSB = 0.01 DEGREES/SECOND
14	SET TO LOGIC 0
15	MSB OF BEARING RATE

80.1.6.1.2.1.15 BIT Summary Word. The format of the BIT Summary Word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00AE ₁₆
P W R U P F	A G C F	R E C S E N S F	P W R A M P F	S Y N T H F	R A M F	R O M F	C P U F	0	0	0	0	0	0	F A I L I N D	S T I N D	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	SELF TEST INDICATOR (STIND) LOGIC 1 = SELF TEST LOGIC 0 = NORMAL OPERATION
1	FAILURE INDICATOR (FAIL IND) LOGIC 1 = TEST FAILURE LOGIC 0 = GOOD RADIO
2-7	SET TO (000000) BINARY
8	LOGIC 1 = CPU FAILURE (CPUF)
9	LOGIC 1 = ROM FAILURE (ROMF)
10	LOGIC 1 = RAM FAILURE (RAMF)
11	LOGIC 1 = SYNTHESIZER LOSS OF LOCK FAILURE (SYNTHF)
12	LOGIC 1 = POWER LEVEL (ENHANCED TACAN) FAILURE (PWR AMP F)
13	LOGIC 1 = RECEIVER SENSITIVITY FAILURE (REC SENS F)
14	LOGIC 1 = AGC FUNCTION FAILURE (AGCF)
15	LOGIC 1 = POWER-UP SELF-TEST FAILURE (PWR UP F)

80.1.6.1.2.1.16 Spare TACAN Word.

80.1.6.1.2.2 TACAN Control Output Words. The SICP shall write the following group of TACAN Control Output Words into Global Memory when the control information is received from the Stand Alone Control Panel (SACP):

- a. TACAN Mode/Channel word
- b. DME Calibration word
- c. Output Word Select
- d. Spare

80.1.6.1.2.2.1 TACAN Mode/Channel Word. The format of the TACAN Mode/Channel Word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00B0 ₁₆
TAC ANT PORT S E L E C T		P W R T E S T	A / A R E C O N L Y	T / R	X / Y	P W R T E S T	CHANNEL									
							TENS-HUN				UNITS					
							80	40	20	10	8	4	2	1		

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-7	TACAN CHANNEL NUMBER (0 TO 126)
8	POWER TEST (PWR TEST). THIS A TWO(2) BIT FIELD. THE OTHER BIT OF THIS FIELD IS LOCATED IN BIT 12 OF THIS WORD.
BIT 12 • 8	••••••••
	0 • 0 OFF
	0 • 1 LOGIC TEST ONLY
	1 • 0 NORMAL TACAN ON/TEST OFF
	1 • 1 COMPLETE TEST
9	X MODE/Y MODE (X/Y) LOGIC 1 = X MODE LOGIC 0 = Y MODE
10	TRANSMIT/RECEIVE-RECEIVE ONLY (T/R - REC ONLY) LOGIC 1 = TRANSMIT/RECEIVE LOGIC 0 = RECEIVE ONLY

<u>BIT</u>	<u>DESIGNATION</u>
11	MODE (A/A) LOGIC 1 = AIR/AIR MODE LOGIC 0 = GROUND/AIR MODE
12	POWER TEST (PWR TEST). SEE BIT 8 OF THIS WORD.
13	NOT USED
14-15	TACAN ANTENNA PORT SELECT
	BIT 15 • 14 •••••••••• 0 • X AUTO ANTENNA SELECT 1 • 0 ANTENNA B 1 • 1 ANTENNA A

80.1.6.1.2.2.2 DME Calibration Word. The format of the DME calibration word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00B1 ₁₆
0	0	0	D M E D L Y	ANT B DELAY						ANT A DELAY						

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-5	TACAN ANTENNA A DELAY LSB = 166.6 NANOSECONDS
6-11	TACAN ANTENNA B DELAY LSB = 166.6 NANOSECONDS
12	DME DELAY (GROUND-TO-AIR Y MODE) LOGIC 1 = 74 SEC (US) LOGIC 0 = 56 SEC (UK)
13-15	SET TO LOGIC 0

80.1.6.1.2.2.3 Output Word Select. The format of the Output Word Select Word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00B2 ₁₆
TACAN OUTPUT WORD SELECT																
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	WORD 1 SELECT
1	2
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10
10	11
11	12
12	13
13	14
14	15
15	16

LOGIC 1 = SUPPLY OUTPUT WORD
LOGIC 0 = DO NOT SUPPLY OUTPUT WORD

- NOTES: (1) THE DATA REDUCTION PROGRAM (DRP) WILL NOT PROCESS THE TACAN OUTPUT DATA UNLESS THE APPROPRIATE BITS IN WORD 21 (OUTPUT WORD SELECT) OF THE 15/8 TRB (TAPE RECORDING BLOCK) ARE SET.
- (2) WORD 21 IS SET EQUAL TO THE TACAN CONTROL WORD IN WORD 12 OF INITIALIZATION BLOCK 63.

80.1.6.1.2.2.4 Fourth TACAN Output Word. (Spare)

80.1.6.1.3 Support Port Interface. The Terminal Support Port shall provide the interface between the following external devices and Global Memory:

- a. Computer Support System (CSS)
- b. Test Support Recording Device (TSRD)
- c. Stand Alone Control Panel (SACP)

Data transfer to and from Global Memory shall be under the control of the external device. The following Global Memory buffers shall be allocated for use by the external devices:

<u>DEVICE</u>	<u>BUFFER SIZE</u>
CSS	128 WORDS
TSRD	2 BUFFERS (UP TO 101 WORDS EACH) 2 STARTING ADDRESS LOCATION WORDS
SACP	1 32-WORD OUTPUT BUFFER 1 SACP INPUT STATUS WORD 1 SACP OUTPUT STATUS WORD

80.1.6.1.3.1 Computer Support System Data Transfer. The CSS shall interchange data with the CPUs through assigned Global Memory Words. The location and names of these words are:

ADDRESS LOCATION	WORD NAME		
		...	
1BF4	CONTROL ONE	.	
1BF5	ADDRESS ONE	.	FOR NICP CPU
1BF6	DATA ONE	.	
1BF7	SPARE ONE	.	
		...	
		...	
1BF8	CONTROL TWO	.	
1BF9	ADDRESS TWO	.	FOR SICP CPU
1BFA	DATA TWO	.	
1BFB	SPARE TWO	.	
		...	
		...	
1BFC	CONTROL THREE	.	
1BFD	ADDRESS THREE	.	FOR SPARE CPU
1BFE	DATA THREE	.	
1BFF	SPARE THREE	.	
		...	

The words with the word "ONE" in their name are those used by CPU ONE and similarly for CPU TWO and THREE.

80.1.6.1.3.1.1 Control Words. The Control Word shall be used by the CSS to inform the CPU which mode of operation is to be performed and which register is to be displayed. The format of the Control Word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	CONTROL WORD
H S	G M			R U N	G O	SUB MODE			REGISTER SELECTION				MODE			

The bit designation shall be as follows:

BIT DESIGNATION

0-2 MODE OF OPERATION

BIT 2 • 1 • 0
 • • • • • • • •
 0 • 0 • 0 DISPLAY REGISTER
 0 • 0 • 1 ONE-STEP AND DISPLAY REGISTER
 0 • 1 • 0 INHIBIT PROGRAM INTERRUPT
 0 • 1 • 1 ENABLE PROGRAM INTERRUPT
 1 • 0 • 0 SNAP-SHOT
 1 • 0 • 1 LOAD REGISTER
 1 • 1 • 0 READ MEMORY
 1 • 1 • 1 WRITE MEMORY

Bits 3, 4, 5, 6 define which register is to be displayed out of a group of registers, up to sixteen registers per group, with the group selected by the sub-mode field, bits 7, 8, 9 in the following way.

SUB-MODE			REGISTER SELECTION				REGISTER SELECTION	REGISTER TYPE
9	8	7	6	5	4	3		
0	0	0	i				R _i	GENERAL REGISTER
0	0	1	1	1	1	1	AU	UPPER ACCUMULATOR
0	0	1	1	1	1	0	AL	LOWER ACCUMULATOR
0	0	1	1	1	0	1	BU	UPPER B REGISTER
0	0	1	1	1	0	0	BL	LOWER B REGISTER
0	1	0	i				T _i	EXTENDED REGISTER
0	1	1	i				MMRAM _i	MEMORY MANAGEMENT
1	0	0	0	0	0	0	MK	MASK REGISTER
1	0	0	0	0	0	1	H PISR	INTERRUPT STATUS REG.
1	0	0	0	0	1	0	PC	PROGRAM COUNTER
1	0	0	0	0	1	1	LOCATION 0014	STORED INTERRUPT STATUS REG.

H The PISR is the mirror image of location 0014. This is so it can be addressed and changed. The PISR can then be loaded by macro, which is an EPPI instruction.

The sub-mode field is also used to define further the Read-Memory and Write Memory modes: for Code 000 in the Sub-mode field, a single word read or a single word write operation is performed; for code 001 in the sub-mode field, a block read or write operation is performed as follows:

<u>BIT</u>		<u>DESIGNATION</u>
<u>RUN</u>	<u>GO</u>	
<u>11</u>	<u>10</u>	
H 0	0	Complete current mode of operation and wait for a new control word.
0	1	Go to "run" after completing current mode of operation.
1	X	Go to 'run' immediately, with starting current mode of operation.

Bit 14 of the control word is used by the CPU to determine if the Global Memory is present in the system. If the bit is a "0" then that is interpreted to mean that the Global Memory is present.

Bit 15, the MSB of the control word is called the Handshake bit, and is used by the CSS to inform the CPU that a new mode of operation has been sent. The CSS does this by putting a zero in this bit. The CPU uses this bit to inform the CSS that the execution of the current mode of operation is completed. The CPU does this by putting a one in this bit.

80.1.6.1.3.1.2 Modes of Operation.

80.1.6.1.3.1.2.1 Entering a Mode of Operation. The CSS places the CPU into one of the eight modes of Operation, defined above, by first transmitting the Control Word to Global Memory with the desired Mode, a sub-mode and register selection fields properly encoded and bit 15 and bit 14 set to zero. Then it must stop the CPU, if it is not already stopped, by writing a zero in bit 8, in location 1F39₁₆. Once the CPU has stopped it will obtain its Control Word from Global Memory, examine bit 15 of this Control Word and, if it is a zero, it will then decode the various additional fields to determine what Mode of Operation is to be performed. Once the selected Mode of Operation has been performed, the CPU will place a one in bit 15 of the Control Word in Global Memory and then examine bit 10, the GO bit. If it is a "1" the CPU will then leave "STOP" and enter "RUN". If it is a zero, it will then begin monitoring bit 15 until bit 15 becomes a zero again, at which time it will then decode the various additional fields again to determine what Mode of Operation is to be performed as before.

80.1.6.1.3.1.2.2 Display Register. The Contents of the Register selected are placed in the CPU's Data Word of the Global Memory, the contents of the Program Counter (PC) are placed in the address word, then bit 15 of the Control Word is set to one, thus completing the Mode of Operation.

H The CPU will remain in this mode until bit 11 is set to 1.

80.1.6.1.3.1.2.3 One-Step and Display Register. When the CPU has determined that this mode is to be executed, it will first execute the next macro instruction and upon completion of this execution, it will place the selected register in its Data Word, the PC in its Address Word, then set bit 15 of the Control Word to one, thus completing this Mode of Operation.

80.1.6.1.3.1.2.4 Inhibit Program Interrupt. In this Mode of Operation the CPU will execute a DPI (Disable Program Interrupt) instruction, place the selected register in its Data word, the PC in its address word, then set bit 15 of the Control Word to one, thus completing this Mode of Operation. (PC is not changed.)

80.1.6.1.3.1.2.5 Enable Program Interrupt. In this Mode of Operation the CPU will execute an EPPI (Enable Program Priority Interrupt) instruction, place the selected register in its Data word, the PC in its Address word, then set bit 15 of the Control word to one, thus completing the operation. (PC is not changed.)

80.1.6.1.3.1.2.6 Snap-Shot. This Mode of Operation has two sub- modes: Read or Write. The Write mode is selected if the sub-mode field is set to zero; otherwise, the Read mode is selected. In the Read mode the CPU will read memory from a starting address (16 bits), obtained from its address word, to a stopping address (16 bits), obtained from its Data Word of Global Memory. The data read is placed by the CPU into the Global Memory beginning at address 1B80. No more than 81 words are permitted to be obtained in this way. Once the selected block of memory has been moved into the Global Memory, the succeeding 35 words of Global Memory are filled with the 16 General Registers, followed by the 16 Memory Management Registers, then MK, PISR and finally PC. The CPU will then place the address of the last memory word read into its address word of Global Memory and set bit 15 of its Control Word to One, thus completing the operation. The Write sub-mode of operation proceeds in a similar manner. The CSS must first place the words to be written into Global Memory (no more than 81 words permitted), beginning at 1B80, and then evoke this mode. The CPU will move the block from Global Memory to the specified block in whatever portion of memory desired, fill the succeeding 35 words of Global Memory with the registers as was done in the Read mode, place the address of the last memory word written into its Address Word and set bit 15 of its control word to one, thus completing the operation.

80.1.6.1.3.1.2.7 Load Register. In this Mode of Operation, the CPU will obtain the data to be placed in the selected register from its Data Word in Global Memory, place this data in the selected register, place the PC in the Address Word, then set bit 15 of its control word to one, thus completing this Mode of Operation.

80.1.6.1.3.1.2.8 Read Operation - Single Word. In this Mode of Operation the CPU will obtain the Address (16 bits) of the word to be read from its Address Word in Global Memory, use this Address in conjunction with the memory management RAM to obtain the desired word from macro memory, place the desired word in its Data word in Global Memory and then set bit 15 of its Control word to a one,

thus completing the operation.

80.1.6.1.3.1.2.9 Write Operation - Single Word. In this Mode of Operation the CPU will obtain the Address (16 bits) of the word to be written from its Address word in Global Memory, the data of the word to be written from its Data word in Global Memory, use the Address in conjunction with the memory management RAM to write the word into macro memory, and set bit 15 of its Control word to one, thus completing the operation.

80.1.6.1.3.1.2.10 Read Operation - Block Mode. In this Mode of Operation the CPU will read memory from a starting address (16 bits) obtained from its Address word, to a stopping address (16 bits) obtained from its Data word of Global Memory. The Data read is placed by the CPU into the CMOS RAM portion of the Global Memory beginning at location 1B80₁₆ and extending to location 1BFF. At the completion of each sub-block the CPU places in its Address word of the Global Memory the address of the last word read, then sets bit 15 of its Control word to one. The CSS should then unload the CMOS RAM and set bit 15 of the Control word to a zero. The CPU will then resume the block-read from the location last read plus one. When the last sub-block is read, which may only be a partial sub-block, the CPU finishes as it did for all previous sub-blocks, but now its Address word in Global Memory will have the same value as the Stop Address in its Data word thus completing the operation.

80.1.6.1.3.1.2.11 Write Operation - Block Mode. This Mode of Operation proceeds in a manner very similar to the Read operation -Block mode described above. Here the CSS must first write into the CMOS RAM the first sub-Block to be loaded before starting the CPU.

80.1.6.1.3.2 Test Support Recording Device Data Transfer. The SICP shall provide two TSRD buffers each of which shall consist of up to 101 words of data to be recorded by the TSRD. Selection of the type and amount of data to be recorded shall be controlled by the host platform via Initialization Data. The SICP shall, in addition, supply the starting address of the TSRD buffers currently in use as specified in 80.1.6.1.3.2.1. The Global Memory locations of the TSRD Buffer Starting Address Words shall be 00FC₁₆ for Buffer 1 and 00FD₁₆ for Buffer 2. Each TSRD Buffer Starting Address Word shall also be used by the SICP to inform the TSRD when the associated buffer has been filled and by the TSRD to inform the SICP that the associated TSRD buffer has been read. The protocol for transferring tape recording data to the TSRD shall be as follows:

- a. The SICP shall always fill the buffers sequentially, when data is available starting with buffer 1 (i.e., when bit 15 of the TSRD Buffer 1 starting address is LOGIC 0, the SICP shall fill Buffer 1; when bit 15 of TSRD Buffer 2 starting address is LOGIC 0, the SICP shall fill Buffer 2). The SICP shall fill as many TSRD buffers as possible in a particular slot in accordance with b to d.

- b. If bit 15 = 0, the SICP shall load the starting address of the newly filled TSRD buffer in the TSRD Buffer Starting Address Word. In addition, the SICP shall set bit 15 to a LOGIC 1 which shall inform the TSRD that the TSRD buffer has been filled. If bit 15 = LOGIC 1, then the TSRD has not completed its read of the previous outputted buffer and the SICP shall not load the new starting address until the bit has been set to LOGIC 0 by the TSRD.
- c. The TSRD shall read the TSRD Buffer Starting Address Word. If bit 15 = LOGIC 1, the TSRD shall then command the reading of the TSRD buffer. Each buffer transaction shall occur in groups of 16 words with the TSRD supplying the starting address location for the start of each 16 word group. The first word of the TSRD buffer shall contain the buffer word count and it shall be used by the TSRD to determine the number of 16-word block transfers that have to take place. The TSRD shall complete the TSRD buffer read by the current EOS. If bit 15 = LOGIC 0, the SICP has not completed its buffer fill and the TSRD shall not read the associated TSRD buffer.
- d. Upon completion of the TSRD buffer read, the TSRD shall set bit 15 of the associated TSRD Buffer Starting Address Word to LOGIC 0.
- e. The sequence of events shall then be repeated. The format of each TSRD buffer shall be as follows:

MSB											LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 0										WORD COUNT						
wd 1																
wd 2																
wd 3																
:	:															
wd n-1																
wd n																

The bit designation shall be as follows:

WORD 0

<u>BIT</u>	<u>DESIGNATION</u>
0-6	WORD COUNT NUMBER OF WORDS IN TSRD BUFFER THAT ARE VALID, EXCLUDING WORD COUNT WORD RANGE: 0-100

<u>BIT</u>	<u>DESIGNATION</u>
7-15	NOT USED

WORDS 1-N N WORDS OF TAPE RECORDER DATA WHERE $0 < N \leq 100$

80.1.6.1.3.2.1 TSRD Buffer Starting Address Word. The format of the two TSRD Buffer Starting Address Words shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION
D A			TSRD BUFFER 1 STARTING ADDRESS													00FC ₁₆
D A			TSRD BUFFER 2 STARTING ADDRESS													00FD ₁₆

The bit designation shall be as follows:

WORD 1 AND 2 00FC AND 00FD₁₆

<u>BIT</u>	<u>DESIGNATION</u>
0-12	TSRD BUFFER STARTING ADDRESS
13-14	NOT USED
15	DATA AVAILABLE (DA) LOGIC 1 = DATA AVAILABLE FOR TSRD AT STARTING ADDRESS LOGIC 0 = TSRD HAS READ TSRD BUFFER (SICP CAN REFILL BUFFER)

80.1.6.1.3.2.2 Tape Recording Data Format. The format of the first three (3) words of a Tape Recording (TR) Data Block that is recorded shall be the same as the format of the first three words of the DTB Data Block (see 10.1.1.3.1). All of the DTBs specified in Table VIII-VI shall be recordable; their TR data format shall be the same as their DTB data format as specified in 10.1.1.3.1 and its subparagraphs. In addition, other Terminal Data specified in Table VIII-VII shall be recorded using the formats specified in the following subparagraphs.

TABLE VIII-VI. RECORDABLE DTBs

DTB	PARAGRAPH NUMBER
MESSAGE TO TRANSMIT	10.1.1.3.1.1
RECEIVED MESSAGE/LOOPBACK TRANSMISSION	10.1.1.3.1.3
NAV DATA FROM SICP	10.1.1.3.1.4
START-UP NAV DATA	10.1.1.3.1.4.5
NAV DATA FROM NICP	10.1.1.3.1.5
BI-DIRECTIONAL INITIALIZATION DATA	10.1.1.3.1.6.1
NICP INITIALIZATION DATA STATUS RESPONSE	10.1.1.3.1.6.2
NPG MAPPING STATUS BLOCK	10.1.1.3.1.7.1
REAL TIME SLOT ASSIGNMENT SEQUENCE	10.1.1.3.1.7.2
MESSAGE STATUS	10.1.1.3.1.7.3
NICP 12-SECOND STATUS REPORT	10.1.1.3.1.7.4
SICP STATUS REPORT	10.1.1.3.1.7.5
SYNCHRONIZATION FILTER DATA	10.1.1.3.1.8.1
REL NAV KALMAN FILTER STATE VECTOR AND COVARIANCE DIAGONAL	10.1.1.3.1.8.2
REL NAV KALMAN FILTER OBSERVATION DATA	10.1.1.3.1.8.3

TABLE VIII-VII. RECORDABLE TAPE RECORDING BLOCKS

TAPE RECORDING BLOCK	PARAGRAPH NUMBER
TR TERMINAL STATUS DATA	80.1.6.1.3.2.2.2
TR PANEL/SICP DATA	80.1.6.1.3.2.2.3
TR SICP/PANEL DATA	80.1.6.1.3.2.2.4
MUX DATA	80.1.6.1.3.2.2.5
SICP MEMORY BLOCKS	80.1.6.1.3.2.2.6
RECEIVED MESSAGE HEADER DATA	80.1.6.1.3.2.2.7
TR TACAN INPUT/OUTPUT DATA H	80.1.6.1.3.2.2.8
CONTROL DISCRETE DATA	80.1.6.1.3.2.2.9
RTSS DATA AS MODIFIED BY TSR SELECTION	80.1.6.1.3.2.2.10

H APPLIES TO NAVY AIR ONLY

80.1.6.1.3.2.2.2 Tape Recorder (TR) Terminal Status Data. The TR data format shall be as follows:

	MSB								LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 0	0	1	0	0	1	1	1	1	WORD COUNT							
wd 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
wd 2	TIME TAG															
wd 3	TERMINAL FAIL DDP (TDMA) WORD 1															
wd 4	TERMINAL FAIL DDP (TDMA) WORD 2															
wd 5	TERMINAL FAIL R/T (TDMA) WORD 3															
wd 6	TERMINAL FAIL R/T (TDMA) WORD 4															
wd 7	TACAN FAIL R/T (TACAN) WORD 5 (<u>NAVY AIR ONLY</u>)															
wd 8	TERMINAL FAIL IU (TDMA) WORD 6															
wd 9	TACAN FAIL IU (TDMA) WORD 7 (<u>NAVY AIR ONLY</u>)															
wd 10	TERMINAL FAIL BATTERY (TDMA) WORD 8															
wd 11	TERMINAL FAIL RF LOOPBACK (TDMA) WORD 9															
wd 12	TERMINAL FAIL IU (TDMA) WORD 10															
wd 13	MESSAGE STATUS WORD															
wd 14	WRA BIT AND STATUS SUMMARY WORD															
wd 15	SRA SUMMARY WORD (<u>NAVY SHIP ONLY</u>)															
wd 16	SDU ALERT WORD															
wd 17	DEGRADED PERFORMANCE WORD															
wd 18	IPF FAIL WORD R/T-HPA (TDMA)															
wd 19	START UP/INTERRUPT WORD															
wd 20	NICP/SICP DEGRADED OPERATION WORD															
wd 21	TERMINAL FAIL HPAG WORD 11															
wd 22	NOT USED BY NAVY															
wd 23	NOT USED BY NAVY															

80.1.6.1.3.2.2.2.1 Terminal Fail DDP (TDMA) Word 1.

	MSB								LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 3	M B T E S T F	I F L B F L	P T P M B	M B T E S T		G M A F	G M F	C H F	N W S R					R O M F	R A M F	C P U F

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = NICP CPU FAIL (CPUF)
1	LOGIC 1 = NICP RAM FAIL (RAMF)
2	LOGIC 1 = NICP ROM FAIL (ROMF)
3-6	NOT USED
7	LOGIC 1 = NICP WRA STATUS REPORT NOT RECEIVED BY SICP (NWSR)
8	LOGIC 1 = CHRONOMETER FAIL (CHF)
9	LOGIC 1 = GLOBAL MEMORY TEST FAIL (GMF)
10	LOGIC 1 = GLOBAL MEMORY ADDRESS TEST FAIL (GMAF)
11	RESERVED FOR INTERNAL NICP/SICP USE
12	LOGIC 1 = NICP/PTP MAILBOX TEST FAIL (MBTEST) DETERMINED BY THE PTP.
13	LOGIC 1 = PTP/NICP MAILBOX TEST FAIL (PTPMB) DETERMINED BY THE NICP.
14	LOGIC 1 = IF LOOPBACK FAIL (IFLBFL)
15	LOGIC 1 = SICP/NICP MAILBOX TEST FAIL (MBTESTF) DETERMINED BY THE SICP.

80.1.6.1.3.2.2.2.2 Terminal Fail DDP (TDMA) Word 2.

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 4	D R T I F	C O R R F	P T P T E S T	B B C F	P L L F	D I F L B F L	C P S M F	P T P F L		S D D F	C T P F	X M I T F	O S C F	B I T B F	B I T R F	R T B F

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = REFERENCE TIME BASE FAIL (RTBF) - <u>NAVY SHIP ONLY</u>
1	LOGIC 1 = R SUPPLY FAIL (BITRF) - <u>NAVY SHIP ONLY</u>
2	LOGIC 1 = B SUPPLY FAIL (BITBF) - <u>NAVY SHIP ONLY</u>
3	LOGIC 1 = OSCILLATOR FAIL (OSCF) - <u>NAVY SHIP ONLY</u>
4	LOGIC 1 = XMIT TIMING AND CONTROL FAIL (XMITF) - <u>NAVY SHIP ONLY</u>
5	LOGIC 1 = CTP FAIL (CTPF) - <u>NAVY SHIP ONLY</u>
6	LOGIC 1 = SYNC DATA DET FAIL (SDDF) - <u>NAVY SHIP ONLY</u>
7	SPARE
8	LOGIC 1 = PTP FAIL (PTPFL) - <u>NAVY SHIP ONLY</u>
9	LOGIC 1 = CPSM FAIL (CPSMF) - <u>NAVY SHIP ONLY</u>
10	LOGIC 1 = DIGITAL LOOPBACK FAIL (DIFLBFL)
11	LOGIC 1 = RFG FAIL (PLLFL) - <u>NAVY SHIP ONLY</u>
12	LOGIC 1 = BASEBAND CONVERTER FAIL (BBCF) - <u>NAVY SHIP ONLY</u>
13	LOGIC 1 = PTP SELF TEST (PTPTEST) - <u>NAVY SHIP ONLY</u>
14	LOGIC 1 = CORRELATOR FAIL (CORRF) - <u>NAVY SHIP ONLY</u>
15	LOGIC 1 = DDP-R/T INTERFACE FAIL (DRTIF)

80.1.6.1.3.2.2.2.3 Terminal Fail R/T (TDMA) Word 3.

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 5			R T S R A			C P S M D						R T T D M A F	T M W F		S Y N T H F	R C V R F

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = MULTIPLE RECEIVER FAIL (RCVRF)
1	LOGIC 1 = MULTIPLE SYNTHESIZER FAIL (SYNTHF)
2	NOT USED BY NAVY
3	LOGIC 1 = TUNE MODE WRAPAROUND FAIL (TMWF)
4	LOGIC 1 = R/T TDMA FAIL (RTTDMAF)
5-9	NOT USED
10	LOGIC 1 = CPSM NOT DETECTED (CPSMD)
11-12	NOT USED
13	LOGIC 1 = R/T SRA FAIL (RTSRA)
14-15	NOT USED

80.1.6.1.3.2.2.2.4 Terminal Fail R/T (TDMA) Word 4.

	MSB								LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 6	H I S S	H I S L			T R T T		P A O T F	T S D I P F	P O A N T A	P O A N T B		I F F F	O O B F F	1 0 3 0 M F	P W F	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	NOT USED
1	LOGIC 1 = PULSE WIDTH FAIL (PWF)
2	LOGIC 1 = 1030/1090 MONITOR FAIL (1030 MF)
3	LOGIC 1 = OUT-OF-BOUNDS FREQUENCY FAIL (OOBFF)
4	LOGIC 1 = IFF FREQUENCY COUNTER FAIL (IFFF)
5	NOT USED
6	LOGIC 1 = PO ANT B > + 1 dB, OR > 3dB DOWN (POANTB)
7	LOGIC 1 = PO ANT A > + 1 dB, OR > 3dB DOWN (POANTA)
8	LOGIC 1 = TRANSMISSION SHUTDOWN DUE TO IPF FAIL (TSDIPF)
9	LOGIC 1 = HPA/PA OVER TEMPERATURE (PAOTF)
10	NOT USED
11	LOGIC 1 = TEST RTT LOOPBACK FAILURE (TRTT)
12-13	NOT USED
14	LOGIC 1 = HISTOGRAM LONG TERM FAIL (HISL)
15	LOGIC 1 = HISTOGRAM SHORT TERM FAIL (HISS)

80.1.6.1.3.2.2.2.5 TACAN Fail R/T (TACAN) Word 5.

(NAVY AIR ONLY)

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 7	P W R U P F	A G C F	R E C S E N S F	P W R A M P F	S Y N T H F	R A M F	R O M F	C P U F	N O A C K					R T C F	F A I L I N D	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	NOT USED BY NAVY
1	FAILURE INDICATOR (FAIL IND) LOGIC 1 = TEST FAILURE LOGIC 0 = GOOD RADIO
2	LOGIC 1 = R/T TACAN COMM FAIL (RTCF)
3-6	NOT USED
7	LOGIC 1 = NO R/T ACKNOWLEDGEMENT (NO ACK)
8	LOGIC 1 = CPU FAILURE (CPUF)
9	LOGIC 1 = ROM FAILURE (ROMF)
10	LOGIC 1 = RAM FAILURE (RAMF)
11	LOGIC 1 = SYNTHESIZER FAILURE LOSS OF LOCK (SYNTHF)
12	LOGIC 1 = POWER LEVEL (ENHANCED TACAN) FAILURE (PWR AMP F)
13	LOGIC 1 = RECEIVER SENSITIVITY FAILURE (REC SENS F)
14	LOGIC 1 = AGC FUNCTION FAILURE (AGCF)
15	LOGIC 1 = POWER UP SELF TEST FAILURE (PWR UP F)

80.1.6.1.3.2.2.2.6 Terminal Fail IU (TDMA).

	MSB														LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 8			S I C P S T	C T P W F	P T P W F				S R A F M	T T D M A F	M U X T W F	M U X F	M I C B F / M U X F		T I O F	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	SPARE
1	LOGIC 1 = TAILORED I/O FAIL (TIOF) (<u>NAVY SHIP ONLY</u>)
2	NOT USED
3	LOGIC 1 = MIC BIAS FAIL (MICBF) - (<u>NAVY AIR ONLY</u>) LOGIC 1 = MUX FAIL (MUXF) - (<u>NAVY SHIP ONLY</u>)
4	LOGIC 1 = MUX FAIL (MUXF) - (<u>NAVY AIR ONLY</u>)
5	LOGIC 1 = MUX GM TEST FAIL (MUXTWF)
6	LOGIC 1 = TAILORED TDMA FAIL (TTDMAF)
7	LOGIC 1 = SRA INITIATE IN FALSE MODE (SRAFM) - <u>NAVY SHIP ONLY</u>
8-10	NOT USED
11	LOGIC 1 = PTP BIT INIT WRAPAROUND FAIL (PTPWF) - <u>NAVY SHIP ONLY</u>
12	LOGIC 1 = CTP BIT INIT WRAPAROUND FAIL (CTPWF) - <u>NAVY SHIP ONLY</u>
13	LOGIC 1 = SICP SELF-TEST FAIL (SICPST)
14-15	NOT USED

80.1.6.1.3.2.2.2.7 TACAN Fail IU (TDMA) Word 7.

	MSB															LSB
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 9							T A C F									T P S F

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = TACAN POWER SUPPLY FAIL (TPSF)
1-8	NOT USED
9	LOGIC 1 = TACAN IU FAIL (TACF)
10-15	NOT USED

80.1.6.1.3.2.2.2.8 Terminal Fail Battery (TDMA) Word

	MSB															LSB
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 10										B S T I F						

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-5	NOT USED
6	LOGIC 1 = NICAD BATTERY FAIL (BSTIF)
7-15	NOT USED

80.1.6.1.3.2.2.2.9 Terminal Fail RF Loopback (TDMA) Word 9.

MSB														LSB		
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 11	L B S T A T		L B E	L B D	L B C	L B B	L B A	L B 9	L B 8	L B 7	L B 6	L B 5	L B 4	L B 3	L B 2	L B 1

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = STANDARD FT UNCODED MESSAGE TYPE FAILURE (LB1)
1	LOGIC 1 = PACKED-2 DP FT UNCODED MESSAGE TYPE FAILURE (LB2)
2	LOGIC 1 = PACKED-2 DP FT CODED MESSAGE TYPE FAILURE (LB3)
3	LOGIC 1 = PACKED-2 SP FF CODED MESSAGE TYPE FAILURE (LB4)
4	LOGIC 1 = STANDARD FF CODED MESSAGE TYPE FAILURE (LB5)
5	LOGIC 1 = PACKED-2 DP FF CODED MESSAGE TYPE FAILURE (LB6)
6	LOGIC 1 = STANDARD FT CODED MESSAGE TYPE FAILURE (LB7)
7	LOGIC 1 = PACKED-4 SP FF CODED MESSAGE TYPE FAILURE (LB8)
8	LOGIC 1 = PACKED-2 SP FT UNCODED MESSAGE TYPE FAILURE (LB9)
9	LOGIC 1 = PACKED-4 SP FT UNCODED MESSAGE TYPE FAILURE (LBA)
10	LOGIC 1 = PACKED-4 SP FT CODED MESSAGE TYPE FAILURE (LBB)
11	LOGIC 1 = PACKED-2 SP FT CODED MESSAGE TYPE FAILURE (LBC)
12	LOGIC 1 = TEST RTT LOOPBACK FAILURE (LBD)

WORD 11 (CONTIUNED)

<u>BIT</u>	<u>DESIGNATION</u>
13	LOGIC 1 = RTT INT 2A MESSAGE TYPE FAILURE (LBE)
14-15	LOOPBACK STATUS (LBSTAT)
BIT 15 • 14	
••••••••••	
0 • 0	TRANSMIT NO ERROR
0 • 1	DECODE FAIL
1 • 0	TOA COMPARE FAIL
1 • 1	NO LOOPBACK RECEIVED

80.1.6.1.3.2.2.2.10 Terminal Fail IU (TDMA) Word 10.

	MSB														LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 12								V P T W D 2 F	V P T W D 1 F	V 2 F	V 1 F	T I O F			S I C R O M	S I C R A M

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = SICP RAM FAIL (SICRAM)
1	LOGIC 1 = SICP ROM FAIL (SICROM)
2-3	NOT USED
4	LOGIC 1 = TAILORED I/O FAIL (TIOF) - <u>NAVY AIR ONLY</u>
5	LOGIC 1 = VOICE 1 FAIL (V1F)
6	LOGIC 1 = VOICE 2 FAIL (V2F)
7	LOGIC 1 = VOICE PROCESSOR TEST WORD 1 FAIL (VPTWD1F)
8	LOGIC 1 = VOICE PROCESSOR TEST WORD 2 FAIL (VPTWD2F)
9-15	NOT USED

80.1.6.1.3.2.2.2.11 Message Status Word.

	MSB										LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 13					T M F				M N A		N R T T R	N M E S S	M E R			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-2	NOT USED
3	LOGIC 1 = UNCORRECTABLE MESSAGE ERROR RATE (MER)
4	LOGIC 1 = NO MESSAGE RECEPTION (NMESS)
5	LOGIC 1 = NO RESPONSE TO RTT INTERROGATIONS (NRTTR)
6	NOT USED
7	LOGIC 1 = MESSAGE NOT ACKNOWLEDGED (MNA)
8-10	NOT USED
11	LOGIC 1 = TEST MESSAGE FAIL (TMF)
12-15	NOT USED

80.1.6.1.3.2.2.2.12 WRA BIT and Status Summary Word.

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 14					H P A F	B S T I F	D E G P R	M F	I P F F	S D U A L	R T F	I U F	D D D F	T A C F	T D M A F	T E R M F

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = TERMINAL FAIL (TERMF)
1	LOGIC 1 = TDMA FAIL (TDMAF)
2	LOGIC 1 = TACAN IU FAIL (TACF) - <u>NAVY AIR ONLY</u>
3	LOGIC 1 = DDP FAIL (DDDF)
4	LOGIC 1 = IU FAIL (IUF)
5	LOGIC 1 = R/T FAIL (RTF)
6	LOGIC 1 = SDU ALERT (SDUAL)
7	LOGIC 1 = IPF FAIL (IPFF)
8	LOGIC 1 = MESSAGE FAIL (MF)
9	LOGIC 1 = DEGRADED PERFORMANCE (DEGPR)
10	LOGIC 1 = NICAD BATTERY FAIL (BSTIF)
11	LOGIC 1 = HPAG FAIL (HPAF)
12-15	NOT USED

80.1.6.1.3.2.2.2.13 SRA Summary Word. NAVY SHIP ONLY

MSB										LSB						
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 15		UNIT			SRATMPF				SRASMPF				SRAMPF			

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-3	SRA MOST PROBABLE FAIL INDICATOR (SRAMPF)
BIT 3 • 2 • 1 • 0	
• • • • •	
0 • 0 • 0 • 0	NO FAILURE
0 • 0 • 0 • 1	CARD A1 FAILED
• • • • •	•
• • • • •	•
1 • 1 • 1 • 1	CARD A15 FAILED
4-7	SRA SECOND MOST PROBABLE FAIL INDICATOR (SRASMPF)
BIT 7 • 6 • 5 • 4	
• • • • •	
0 • 0 • 0 • 0	NO FAILURE
0 • 0 • 0 • 1	CARD A1 FAILED
• • • • •	•
• • • • •	•
1 • 1 • 1 • 1	CARD A15 FAILED
8-11	SRA THIRD MOST PROBABLE FAIL INDICATOR (SRATMPF)
BIT 11 • 10 • 9 • 8	
• • • • •	
0 • 0 • 0 • 0	NO FAILURE
0 • 0 • 0 • 1	CARD A1 FAILED
• • • • •	•
• • • • •	•
1 • 1 • 1 • 1	CARD A15 FAILED
12-14	UNIT-INDICATES THE WRA IN WHICH THE FAILED CARDS ARE LOCATED
BIT 14 • 13 • 12	
• • • • •	
0 • 0 • 0	NO FAILURE
0 • 0 • 1	R/T
0 • 1 • 0	DDP
0 • 1 • 1	IU
1 • 0 • 0	SDU
1 • 0 • 1	BATTERY
1 • 1 • 0	NOT USED BY NAVY SHIP
1 • 1 • 1	HPA

BIT DESIGNATION

15 RESERVED FOR INTERNAL NICP/SICP USE

NOTE: SEE PARAGRAPH 40.12.13 FOR A DESCRIPTION OF IDENTIFIED
CARDS (A1 THROUGH A15)

80.1.6.1.3.2.2.2.14 SDU Alert Word.

	MSB										LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 16		V A R 7	V A R 6	V A R 5	V A R 4	V A R 3	V A R 2	V A R 1	V A R 0	A L A R M						

The bit designation shall be as follows:

BIT DESIGNATION

0-5 NOT USED

6 SDU ALARM (ALARM)
LOGIC 1 = SDU ALARM HAS OCCURRED

7 LOGIC 1 = VAR 0 BAD

8 LOGIC 1 = VAR 1 BAD

9 LOGIC 1 = VAR 2 BAD

10 LOGIC 1 = VAR 3 BAD

11 LOGIC 1 = VAR 4 BAD

12 LOGIC 1 = VAR 5 BAD

13 LOGIC 1 = VAR 6 BAD

14 LOGIC 1 = VAR 7 BAD

15 NOT USED

80.1.6.1.3.2.2.2.15 Degraded Performance Word.

MSB																LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 17											P O A N T A		P O A N T B	L P A O T F	V S W R B F	V S W R A F	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	NOT USED
1	LOGIC 1 = VSWR ANT A FAIL (VSWRAF)
2	LOGIC 1 = VSWR ANT B FAIL (VSWRBF)
3	LOGIC 1 = POWER AMPLIFIER (PA) OVER LOW TEMPERATURE THRESHOLD (LPAOTF)
4	POWER OUTPUT ANT B PERFORMANCE (POANTB) LOGIC 0 = PERFORMANCE NOT DEGRADED LOGIC 1 = 1 dB < POWER OUTPUT < 3 dB DOWN
5	NOT USED
6	POWER OUTPUT ANT A PERFORMANCE (POANTA) LOGIC 0 = PERFORMANCE NOT DEGRADED LOGIC 1 = 1 dB < POWER OUTPUT < 3 dB DOWN
7-15	NOT USED

NOTE: THE DEGRADED PERFORMANCE WORD PERTAINS TO THE HPA,
WHEN HPA PRESENT IS SELECTED AND TO THE R/T WHEN HPA
PRESENT IS NOT SELECTED

80.1.6.1.3.2.2.2.16 IPF Fail Word R/T-HPA (TDMA).

	MSB															LSB
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 18									T S D I P F			U	R E F	P W F	F S F	P L F

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = IPF POWER LIMIT FAILURE (PLF)
1	LOGIC 1 = IPF FREQUENCY SPECTRUM FAILURE (FSF)
2	LOGIC 1 = IPF PULSE WIDTH FAILURE (PWF)
3	LOGIC 1 = IPF RADIATED ENERGY FAILURE (REF)
4	LOGIC 1 = IPF UTILIZATION FAILURE (U)
5-6	SPARE
7	LOGIC 1 = TRANSMISSION SHUTDOWN DUE TO IPF FAILURE (TSDIPF) [HARDWARE IPF FAILURE, HPA OR R/T, OR TRANSMIT DUTY FACTOR LIMIT EXCEEDED]
8-15	SPARE

80.1.6.1.3.2.2.2.17 Start Up/Interrupt Word.

	MSB															LSB
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 19	START-UP/INTERRUPT															

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-15	AAAA ₁₆ = OPERATIONAL MODE OR TRANSITION FROM RECOVERABLE POWER INTERRUPT
	RANDOM BITS = COLD START UP

80.1.6.1.3.2.2.2.18 NICP/SICP Degraded Operation Word.

	MSB											LSB				
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 20	S Q N S	D V Z S	O V S	N O B S	T O S							S Q N N	D V Z N	O V N	N O B N	T O N

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	LOGIC 1 = NICP TIME OVERLOAD (TON)
1	LOGIC 1 = NO NICP INTERNAL BUFFERS (NOBN)
2	LOGIC 1 = NICP FLOATING POINT OVERFLOW (OVN)
3	LOGIC 1 = NICP DIVIDE BY ZERO (DVZN)
4	LOGIC 1 = NICP NEGATIVE SQUARE ROOT (SQNN)
5-10	NOT USED
11	LOGIC 1 = SICP TIME OVERLOAD (TOS)
12	LOGIC 1 = NO SICP INTERNAL BUFFERS (NOBS)
13	LOGIC 1 = SICP FLOATING POINT OVERFLOW (OVS)
14	LOGIC 1 = SICP DIVIDE BY ZERO (DVZS)
15	LOGIC 1 = SICP NEGATIVE SQUARE ROOT (SQNS)

80.1.6.1.3.2.2.2.19 Terminal Fail HPAG Word 11.

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 21	H I S S	H I S S L	H P A S		T R T T		P A O T F	T S D I P F	P O A N T A	P O A N T B		I F F F	O O B F F	1 0 3 0 M F	P W F	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	SPARE
1	LOGIC 1 = PULSE WIDTH FAIL (PWF)
2	LOGIC 1 = 1030/1090 MONITOR FAIL (1030MF)
3	LOGIC 1 = OUT-OF-BOUNDS FREQUENCY FAIL (OOBFF)
4	LOGIC 1 = IFF FREQUENCY COUNTER FAIL (IFFF)
5	SPARE
6	LOGIC 1 = Po ANT B > +1 dB or < -3 dB (POANTB)
7	LOGIC 1 = Po ANT A > +1 dB or < -3 dB (POANTA)
8	LOGIC 1 = TRANSMISSION SHUTDOWN DUE TO IPF FAIL (TSDIPF)
9	LOGIC 1 = PA OVER HIGH THRESHOLD TEMPERATURE (PAOTF)
10	SPARE
11	LOGIC 1 = TEST RTT LOOPBACK FAILURE (TRTT)
12	SPARE
13	LOGIC 1 = HPA SRA FAIL (HPAS)
14	LOGIC 1 = LONG TERM HISTOGRAM FAIL (HISL)
15	LOGIC 1 = SHORT TERM HISTOGRAM FAIL (HISS)

80.1.6.1.3.2.2.3 TR Panel/SICP Data (SICP input). The TR data format shall be as follows:

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 0	0	1	0	0	1	1	1	1	0	0	1	0	0	0	1	
												1				
wd 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
wd 2	TIME TAG															
wd 3	PANEL/SICP DATA WORD 1															
:	:															
wd 34	PANEL/SICP DATA WORD 32															

The bit designation shall be as follows:

WORD 3 PANEL/SICP DATA WORD 1

.

WORD 34 PANEL/SICP DATA WORD 32

80.1.6.1.3.2.2.4 TR SICP/Panel Data (SICP output). The TR data format shall be as follows:

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 0	0	1	0	0	1	1	1	1	0	0	1	0	0	0	1	
												1				
wd 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
wd 2	TIME TAG															
wd 3	SICP/PANEL DATA WORD 1															
:	:															
wd 34	SICP/PANEL DATA WORD 32															

The bit designation shall be as follows:

WORD 3 SICP/PANEL DATA WORD 1

.

WORD 34 SICP/PANEL DATA WORD 32

80.1.6.1.3.2.2.5 MUX Data. The TR data format shall be as follows:

MSB																LSB
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 0	0	1	0	0	1	1	1	1	WORD COUNT							
wd 1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
wd 2	TIME TAG															
wd 3	I / O											SUBADDRESS				
wd 4	MUX BLOCK WORD 1															
:	:															
wd N+3	MUX BLOCK WORD N (N#32)															

The bit designation shall be as follows:

WORD 3

<u>BIT</u>	<u>DESIGNATION</u>
0-4	SUBADDRESS
5-14	NOT USED
15	LOGIC 0 = OUTPUT MUX BLOCK (TOM) LOGIC 1 = INPUT MUX BLOCK (TIM)

WORD 4

<u>BIT</u>	<u>DESIGNATION</u>
0-15	MUX BLOCK WORD 1

WORD N+3

<u>BIT</u>	<u>DESIGNATION</u>
0-15	MUX BLOCK WORD N (N<32)

80.1.6.1.3.2.2.6 SICP Memory Blocks. The TR data format shall be as follows:

MSB															LSB		
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 0	0	1	0	0	1	1	1	1	WORD COUNT								
wd 1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	
wd 2	TIME TAG																
wd 3	MSB ADD								MEMORY WORD COUNT								
wd 4	ADDRESS																
wd 5	WORD (1)																
:	:																
wd MWC+4	WORD (MWC)																

The bit designation shall be as follows:

WORD 3

<u>BIT</u>	<u>DESIGNATION</u>
0	NOT USED
1-8	MEMORY WORD COUNT (1#MWC#100). THE NUMBER OF WORDS REQUESTED
9-11	NOT USED
12-15	FOUR MSBs OF 20 BIT STARTING ADDRESS OF MEMORY BLOCK REQUESTED

WORD 4

<u>BIT</u>	<u>DESIGNATION</u>
0-15	LOWER 16 BITS OF 20 BIT STARTING ADDRESS

WORDS 5 TO MWC +4

<u>BIT</u>	<u>DESIGNATION</u>
0-15	REQUESTED MEMORY WORDS

80.1.6.1.3.2.2.7 Received Message Header Data. The TR data format for Fixed Format messages shall be as follows:

MSB																LSB
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 0	0	1	0	0	1	1	1	1	WORD COUNT							
wd 1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
wd 2	TIME TAG															
wd 3	XMIT NPG					RCVTAG				LBSTAT			NUMBER VAL MSG			
wd 4	CT		SAE NO.							TQSTAT						
wd 5	TOA															
wd 6	TOA															
wd 7	TOTAL ERASURE COUNT										B1					
wd 8	CTP LCN						CTP CNTL		R C V A N T	D L B I		T / M	TYPE			
wd 9		STN														
wd 10 thru N	THE BLOCK ERROR, MESSAGE ERROR, AND OUTER PARITY INDICATORS AT THE END OF THE MESSAGE CAN BE FOUND IN FIGURES I-XVIII, I-XXVII,I-XXVIII AND I-XXIX.															
wd N+1	LOOPBACK ID TAG 1/MSGPTR 1															
:	:															
wd N+P	LOOPBACK ID TAG P (P#12)/MSGPTR P (P#12)															
wd N+P+1	CHECKSUM															
wd N+P+2																

∇ WORDS N+1 THROUGH N+P - VALID IF RCVTAG = 0, 2, 4, 8

∇ WORDS N+P+1 AND N+P+2 - VALID IF RCVTAG = 0, 4

WORD 3

<u>BIT</u>	<u>DESIGNATION</u>
0-3	NUMBER OF VALID FF MESSAGES (NUMBER VAL MSG) IF RCVTAG = 0,2,4 OR NUMBER OF MESSAGE ID TAGS IF RCVTAG = 8.
4-6	STATUS OF LOOPBACK TRANSMISSION (LBSTAT)
BIT	6 . 5 . 4

	0 . 0 . 0 TRANSMITTED - NO ERRORS
	0 . 0 . 1 DECODE FAIL
	0 . 1 . 0 TOA COMPARISON FAIL
	0 . 1 . 1 NO LOOPBACK RECEIVED
	1 . 0 . 0 NOT USED

	1 . 1 . 1 NOT USED
7-10	RECEIVED MESSAGE TAG (RCVTAG)
BIT	10 . 9 . 8 . 7

	0 . 0 . 0 . 0 RECEIVED MESSAGE - NO ERRORS

	0 . 0 . 0 . 1 RECEIVED MSG - HEADER DECODE FAIL

	0 . 0 . 1 . 0 RECEIVED MSG - BLOCK ERRORS
	0 . 0 . 1 . 1 SPARE
	0 . 1 . 0 . 0 RECEIVED MSG - DUPLICATE
	0 . 1 . 0 . 1 RECEIVED RTT REPLY / INTERROGATION LOOPBACK

	0 . 1 . 1 . 0 RECEIVED RTT INTERROGATION / REPLY LOOPBACK

	0 . 1 . 1 . 1 NON-DECRYPTABLE PVM
	1 . 0 . 0 . 0 RECEIVED LOOPBACK
	1 . 0 . 0 . 1 NOT USED

	1 . 1 . 1 . 1 NOT USED
11-15	XMIT NPG ASSOCIATED WITH SLOT OF TRANSMISSION, (INTERNAL NPG, ASSIGNED BY THE NICP)

WORD 4

<u>BIT</u>	<u>DESIGNATION</u>
0-5	TRANSMISSION QUEUE STATUS (TQSTAT) - THE NUMBER OF SPACES AVAILABLE FOR MESSAGES (0-48;49-63 NOT USED)
6-12	TIME SLOT BLOCK INDEX (SAE NUMBER) ASSOCIATED WITH THE SLOT OF RECEPTION/TRANSMISSION (64 INDICATES UNASSIGNED SLOT) (0-64; 65-127 NOT USED)
13-14	NOT USED

WORD 4

<u>BIT</u>	<u>DESIGNATION</u>
15	CATALOG TYPE LOGIC 1 = NOT USED LOGIC 0 = TADIL J

WORDS 5 AND 6

TOA, REAL (see 4.1): NANOSECONDS

WORD 7

<u>BIT</u>	<u>DESIGNATION</u>
0-5	HEADER BLOCK ERROR (B1). THE HEADER BLOCK ERROR IS AS DEFINED IN 10.1.1.2.2.
6	NOT USED
7-15	TOTAL ERASURE COUNT OF RECEIVED MESSAGE

WORD 8

<u>BIT</u>	<u>DESIGNATION</u>
0-3	MESSAGE TYPE AND TYPE MODIFIER (TYPE & T/M). THE FIELD DEFINITION IS AS SPECIFIED IN 10.1.1.2.2.
4	NOT USED
5	DIGITAL LOOPBACK INDICATOR (DLBI) LOGIC 1 = NORMAL MODE LOGIC 0 = DIGITAL LOOPBACK MODE
6	RECEIVE ANTENNA (RCVANT) - INDICATES AT WHICH ANTENNA THE MESSAGE WAS RECEIVED. LOGIC 1 = RECEIVED ON ANT B LOGIC 0 = RECEIVED ON ANT A
7	NOT USED
8-9	CTP CNTL - THIS FIELD DEFINES WHEN THE CTP CONTROL IS VALID.
BIT	9 • 8
	• • • • •
	0 • 0 RELAY TAG IS VALID
	0 • 1 RELAY TAG IS NOT VALID, DEFAULT
	1 • 0 DECODE FAILURE OCCURRED
	1 • 1 BUFFER IS FULL

WORD 8

<u>BIT</u>	<u>DESIGNATION</u>
10	NOT USED
11-15	CTP BUFFER LOCATION (CTP LCN)

WORD 9

<u>BIT</u>	<u>DESIGNATION</u>
0-14	SOURCE TRACK NUMBER (STN) CONSISTS OF FIVE OCTAL DIGITS (00000 TO 77777)
	<div style="display: flex; justify-content: space-around; text-align: center;"> D 4 D 3 D 2 D 1 D 0 </div> <div style="display: flex; justify-content: space-around; text-align: center;"> </div>
15	<div style="display: flex; justify-content: space-around;"> 14,13,12 11,10,9 8,7,6 5,4,3 2,1,0 </div> NOT USED

WORDS 10 TO N

BLOCK ERROR WORDS. THE FORMAT FOR THE BLOCK ERROR WORDS IS AS SPECIFIED IN 10.1.1.2.2.

WORDS N+1 TO N+P

THE LOOPBACK MESSAGE TAGS FOR (UP TO 12) MESSAGES TRANSMITTED - (VALID IF RCVTAG = 8) OR THE ERROR FREE FF MESSAGE BUFFER POINTERS (MSGPTR) (VALID IF RCVTAG = 0, 2, 4)

WORDS N+P+1 AND N+P+2

A 32-BIT INTEGER CHECKSUM OF THE RECEIVED MESSAGE BODY - VALID IF RCVTAG=0 OR 4. BOOLEAN CHECKSUM COMPUTATION SHALL BE UTILIZED.

THE TR DATA FORMAT FOR FREE TEXT MESSAGES SHALL BE AS FOLLOWS:

MSB																LSB
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 0	0	1	0	0	1	1	1	1								
wd 1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
wd 2	TIME TAG															
wd 3	XMIT NPG					RCVTAG				LBSTAT			NUMBER VAL MSG			
wd 4	CT		SAE NO.							TQSTAT						
wd 5	TOA															
wd 6	TOA															
wd 7	TOTAL ERASURE COUNT										B ₁					
wd 8	CTP LCN						CTP CNTL		R C V A N T	D L B I		T / M	TYPE			
wd 9		STN														
wd 10 thru N	THE BLOCK ERROR AND MESSAGE ERROR INDICATORS AT THE END OF THE MESSAGE CAN BE FOUND IN FIGURES I-XVI, I-XVII, I-XXI, THROUGH I-XXVI.															
wd N+1	LOOPBACK ID TAG 1/MSGPTR 1															
:	:															
wd N+P	LOOPBACK ID TAG P (P#12)/MSGPTR P (P#12)															
wd N+P+1	CHECKSUM															
wd N+P+2																

∇ WORDS 10 AND 11 - EACH PRESENT AS NECESSARY FOR NON-ERROR CODED FREE TEXT MESSAGES

∇ WORDS 10 THROUGH N - EACH PRESENT AS NECESSARY FOR ERROR-CODED FREE TEXT MESSAGES

∇ WORDS N+1 THROUGH N+P - VALID IF RCVTAG = 0, 2, 4

∇ WORDS N+P+1 THROUGH N+P+2 - VALID IF RDVTAG = 0, 4

THE FIELD DEFINITIONS ARE AS SPECIFIED FOR THE FIXED FORMAT MESSAGES TR BLOCK WITH THE EXCEPTION OF THE FOLLOWING: WORDS 10 AND N BLOCK ERASURE COUNT - NUMBER OF DETECTED ERASURES IN THE FOLLOWING MESSAGE BLOCK DOES NOT INCLUDE HEADER ERASURES.

The TR data format for RTT messages shall be as follows:

MSB																LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 0	0	1	0	0	1	1	1	1	WORD COUNT								
wd 1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
wd 2	TIME TAG																
wd 3	XMIT NPG					RCV TAG				LBSTAT			NUMBER VAL MSG				
wd 4				SAE NO.						TQSTAT							
wd 5													MSB		TOA		
wd 6	TOA															LSB	
wd 7	TOTAL ERASURE COUNT										B ₁						
wd 8H	CTP LCN						CTP CNTL			R C V A N T	D L B I			M S B	HDR TOA		
wd 9H	HEADER TOA																L S B

--OR--

wd 8I	CT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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H VALID FOR RTT REPLY RECEIVED MESSAGE

I VALID FOR RTT INTERROGATION RECEIVED MESSAGE

The field definitions are as specified for the Fixed Format messages TR block.

80.1.6.1.3.2.2.8 TR TACAN Input/Output Data. The TR data format shall be as follows: NAVY AIR ONLY

	MSB								LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 0	0	1	0	0	1	1	1	1	WORD COUNT							
wd 1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
wd 2	TIME TAG															
wd 3	RANGE (BINARY)															
wd 4	BEARING (BINARY)															
wd 5	MODE/CHANNEL FEEDBACK															
wd 6	FUNCTION STATUS															
wd 7	BEARING (BAM)															
wd 8	ODOMETER (UNITS)															
wd 9	ODOMETER (TENS)															
wd 10	ODOMETER (HUNDREDS)															
wd 11	BEARING SIN ($\theta+60B$)															
wd 12	BEARING SIN ($\theta-60B$)															
wd 13	SPARE															
wd 14	SPARE															
wd 15	RANGE RATE															
wd 16	BEARING RATE															
wd 17	BIT SUMMARY															
wd 18	SPARE															
wd 19	TACAN MODE/CHANNEL WORD															
wd 20	DME CALIBRATION WORD															
wd 21	OUTPUT WORD SELECT															
wd 22	SPARE															

THE WORD FORMATS SHALL BE AS SPECIFIED IN 80.1.6.1.2 AND ITS SUBPARAGRAPHS.

80.1.6.1.3.2.2.9 Control Discrete Data. The TR data format shall be as follows:

	MSB								LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 0	0	1	0	0	1	1	1	1	0	0	0	0	1	1	1	
wd 1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
wd 2	TIME TAG															
wd 3	DATA IN GLOBAL MEMORY 0090															
wd 4	DATA IN GLOBAL MEMORY 0091															
wd 5	DATA IN GLOBAL MEMORY 0092															
wd 6	DATA IN GLOBAL MEMORY 0093															
wd 7	DATA IN GLOBAL MEMORY 0094															
wd 8	DATA IN GLOBAL MEMORY 0095															
wd 9	DATA IN GLOBAL MEMORY 0096															
wd 10	DATA IN GLOBAL MEMORY 0097															
wd 11	DATA IN GLOBAL MEMORY 0098															
wd 12	DATA IN GLOBAL MEMORY 0099															
wd 13	DATA IN GLOBAL MEMORY 009A															

The word formats shall be as specified in section 80.1.1.4 and section 90.1.1.4.

80.1.6.1.3.2.2.10 RTSS Data as Modified by TSR Selection. Reserved for test purposes. The data from the Real Time Slot Assignment Sequence DTB modified to show TSR Pools 0-7 slots.

	MSB								LSB							
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 0	0	1	0	0	1	1	1	1	0	0	1	0	0	0	1	
wd 1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
wd 2	TIME TAG															
wd 3	SLOT 1 DATA															
wd 4	SLOT 2 DATA															
:	:															
wd 34	SLOT 32 DATA															

The bit designation shall be as follows:

The Time Tag is from the RTSAS DTB from which this data was derived. Slots 1 - 32 above correspond to 32 - 63 slots after the Time Tag of the RTSS immediately preceding this DTB.

WORDS 3-34

<u>BIT</u>	<u>DESIGNATION</u>
0-15	SLOT DATA
0 - 7	OWN TERMINAL'S TRANSMIT SLOT FROM CORRESPONDING TSR POOL
8	NON-TSR TRANSMIT SLOT FOR OWN TERMINAL
-1	NON-TRANSMIT SLOT FOR OWN TERMINAL (TSR POOL SLOTS NOT ALLOCATED TO OWN TERMINAL AND OTHER NPG SLOTS, RECEIVE AND DEFAULT).

80.1.6.1.3.3 SACP Data Transfer. The SICP shall provide two 32-word data buffers in Global Memory for use by the SACP for inputting and outputting data to and from Global Memory. The starting address of these two buffers shall be 00BA₁₆ for the SACP input data buffer and 00DC₁₆ for the SACP output data buffer. Once determined, the starting locations shall be fixed. The SICP shall, in addition, provide an input status word for use by the SACP for informing the SICP when the input buffer has been filled. The address location of this SACP input status word shall be 00DA₁₆. An output status word shall be provided by the SICP which shall be used to inform the SACP when the output buffer is filled. The address location of the SACP output status word shall be 00DB₁₆. The input and output buffer status words shall be initialized to zero by the SICP.

When applicable, the SACP shall read the SACP input status word. If the input buffer loaded bit (bit 15 of the SACP input status word) is set to LOGIC 0, the SACP shall write a 32 word data block into the SACP input data buffer. The first control word in this data buffer equal to zero shall indicate that no valid data follows. Upon completion of a SACP write to the SACP input data buffer, the SACP shall set the Input Buffer Loaded Bit (bit 15 of the SACP Input Status word, see 80.1.6.1.3.3.1) to a LOGIC 1. The SICP shall check the status of the SACP input status word and if bit 15 = LOGIC 1, the SICP shall read the contents of the SACP inputs data buffer. After reading the SACP input data buffer, the SICP shall reset the Input Buffer Loaded Bit to LOGIC 0. The SICP shall check the SACP Output Status word prior to writing to the SACP output data buffer. If the Output Buffer Loaded Bit (bit 15 of the SACP Output Status word) is set to LOGIC 0 and the Do Not Load Output Buffer (DNLOB) bit (Bit 0 of the SACP Output Status Word) is not set to a LOGIC 1 the SICP shall, at a minimum, write two words of ongoing status into the SACP output buffer. If the SICP has additional data for the SACP, it shall load the remainder of the 32 word SACP output data buffer. The first control word in this data buffer equal to zero indicates that no valid data follows. The SICP shall not segment responses to SACP requests. Upon completion of a SICP write to the SACP output buffer, the SICP shall set the Output Buffer Loaded bit (bit 15 of the SACP output status word, see 80.1.6.1.3.3.2) to a LOGIC 1 provided that the DNLOB bit is not set to a LOGIC 1. If the DNLOB bit is set to a LOGIC 1, the SICP shall not load the output buffer. The SACP shall check the status of the SACP output status word and if bit 15 = LOGIC 1, the SACP shall read the contents of the SACP output data buffer. The SACP shall then reset the output buffer loaded bit to LOGIC 0. Each status word shall be polled periodically for block availability. The SACP shall poll at a rate of approximately once every 250 milliseconds. The SICP shall poll at a rate of approximately once every 100 milliseconds.

80.1.6.1.3.3.1 SACP Input Status Word. The format of the SACP Input Status Word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATIO N 00DA ₁₆
I B L																

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-14	NOT USED
15	INPUT BUFFER LOADED (IBL) LOGIC 1 = INPUT BUFFER LOADED LOGIC 0 = INPUT BUFFER HAS BEEN READ

80.1.6.1.3.3.2 SACP Output Status Word. The format of the SACP output status word shall be as follows:

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	ADDRESS LOCATION 00DB ₁₆
O B L															D N L O B	

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0	DO NOT LOAD OUTPUT BUFFER (DNLOB) LOGIC 1 = DO NOT LOAD OUTPUT BUFFER (INFORMS SICP NOT TO LOAD SACP OUTPUT BUFFER - NICP IS WRITING)
1-14	NOT USED
15	OUTPUT BUFFER LOADED (OBL) LOGIC 1 = OUTPUT BUFFER LOADED LOGIC 0 = OUTPUT BUFFER HAS BEEN READ

80.1.6.1.3.3.3 SACP Input Buffer Word Format. The following data block types shall be used when inputting data into the SACP input buffer:

- a. Data Request Block
- b. Data Change Request Block
- c. Transmit Message
- d. Rapid Data Load Block to follow
- e. Rapid Data Load Block

The format for the SACP input data buffer shall be as specified in Figure VIII-V. The bit designation for the SACP input buffer words shall be as follows:

CONTROL WORD

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	BT		ATS		AE					RT		WC				

NOTE: THESE REPRESENT VARIOUS POSSIBLE FIELDS OF A CONTROL WORD

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-4	WORD COUNT (WC) THE NUMBER OF CONTIGUOUS WORDS REQUESTED OR CHANGE REQUESTED STARTING AT ADDRESS SPECIFIED IN THE ADDRESS WORD AND AE.
5-6	REQUEST TYPE (RT)
	BIT 6 • 5 • • • • • 0 • 0 SPARE 0 • 1 ADDRESS REQUEST 1 • 0 STATUS REQUEST 1 • 1 INITIALIZATION REQUEST
7	NOT USED
8-11	ADDRESS EXTENSION (AE) CONTAINS FOUR (4) HIGH ORDER BITS FOR EXTENDED ADDRESSING

<u>BIT</u>	<u>DESIGNATION</u>
12-13	ADDRESS TYPE SPECIFIER (ATS)
BIT 13 • 12	
• • • • •	
0 • 0	VIRTUAL
0 • 1	PHYSICAL
1 • 0	DATA WORD CODE FOR TERMINAL
•	DIRECTLY
1 • 1	SPARE
14-15	BLOCK TYPE (BT)
BIT 15 • 14	
• • • • •	
0 • 0	DATA REQUEST ONLY
0 • 1	DATA CHANGE AND REQUEST
1 • 0	DATA CHANGE ONLY
1 • 1	TRANSMIT MESSAGE

ADDRESS WORD

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	ADDRESS WORD															

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-15	ADDRESS WORD 16 BIT ADDRESS WHICH ALONG WITH THE CONTROL WORD DEFINES THE REQUESTED LOCATION

DATA WORD CODE

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	BI						SDW					WC				

The bit designation shall be as follows:

<u>BIT</u>	<u>DESIGNATION</u>
0-4	WORD COUNT (WC) NUMBER OF CONTIGUOUS DATA WORDS DESIRED
5-9	STARTING DATA WORD (SDW) IDENTIFIES DESIRED DATA WORD WITHIN THE BLOCK
10-15	BLOCK ID (BI) NUMBER USED TO IDENTIFY DESIRED BLOCK

NOTE: THE BALANCE OF EVERY BLOCK TRANSMITTED AS WELL AS ALL "DON'T CARE" BITS WILL BE SET TO ZERO.

	MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 1	CONTROL WORD																
wd 2	ADDRESS/DATA WORD CODE WORD																
wd 3	DATA WORD																
:	:																
	DATA WORD																
	CONTROL WORD																
	ADDRESS/DATA WORD CODE WORD																
	DATA WORD																
:	:																
	DATA WORD																
	CONTROL WORD																
	ADDRESS/DATA WORD CODE WORD																
	DATA WORD																
:	:																
wd 32	DATA WORD																

FIGURE VIII-V. SACP INPUT DATA BUFFER

80.1.6.1.3.3.3.1 Data Request Blocks. Two types of data request blocks shall be utilized when inputting data request commands to the SICP, the virtual or physical address request and data word code request. The format for the virtual or physical address block shall be as follows:

DATA REQUEST BLOCK (VIRTUAL OR PHYSICAL ADDRESS)

MSB											LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	0	0	ATS		AE					0	1	WC				
wd 2	ADDRESS WORD															

WC IS THE NUMBER OF CONTIGUOUS WORDS REQUESTED STARTING AT ADDRESS SPECIFIED IN THE ADDRESS WORD AND AE.

THE FORMAT FOR THE DATA WORD CODE REQUEST BLOCK SHALL BE AS follows:

DATA REQUEST BLOCK (DATA WORD CODE)

MSB											LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	0	0	1							RT						
wd 2	DATA WORD CODE															

80.1.6.1.3.3.3.2 Data Change-Request Blocks. Two types of data Change-Request blocks shall be utilized. The virtual or physical change-request and the data word code change request. The format for the virtual or physical change-request shall be as follows:

DATA CHANGE - REQUEST BLOCK (VIRTUAL OR PHYSICAL)

MSB														LSB		
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	0	1	ATS		AE					0	1	WC				
wd 2	ADDRESS WORD															
	DATA WORDS															
:	:															

WC IS THE NUMBER OF CONTIGUOUS WORDS TO BE CHANGE REQUESTED. CHANGES START IN THE WORD FOLLOWING THE ADDRESS WORD IN THE BLOCK.

THE FORMAT FOR THE DATA WORD CODE DATA CHANGE-REQUEST SHALL BE AS FOLLOWS:

DATA CHANGE - REQUEST BLOCK (DATA WORD CODE)

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	0	1	1							RT						
wd 2	DATA WORD CODE															
	DATA WORDS															
:	:															

80.1.6.1.3.3.3.3 Transmit Message Block. The format for the Fixed Format Transmit Message Block shall be as follows:

MSB																LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
wd 1	1	1															
wd 2					MESSAGE ID (LOOPBACK) TAG												
wd 3	CT	NPG (INT)					LENGTH (L)				PACK				DATA TYPE		
wd 4	TIME SLOT														XSET		
wd 5	PRIORITY																
wd 6	STALENESS																
wd 7	EX	NAV VALID TIME TAG															
wd 8	ACTION					REP		HOP COUNT				RR / R/C CODE					
wd 9	R/C CHECKSUM																
wd 10																	
wd 11		STN															
wd 12	15															0	
wd 13	31															TADIL J	16
wd 14	47															MESSAGE	32
wd 15	63															WORD 1	48
wd 16											69						64
wd 17	15															0	
wd 18	31															TADIL J	16
wd 19	47															MESSAGE	32
wd 20	63															WORD 2	48
wd 21											69						64
. .																	

The bit designation shall be as follows:

WORD 2

<u>BIT</u>	<u>DESIGNATION</u>
0-11	Message Tag of msg for transmission
12-15	Reserved for SICP use

WORD 3

<u>BIT</u>	<u>DESIGNATION</u>
0-1	DATA TYPE
BIT 1 • 0	
• • • • •	
0 • 0	FREE TEXT UNCODED H
0 • 1	FREE TEXT CODED
•	(see 80.1.4.8.1.2.2.3)
1 • 0	FIXED FORMAT
1 • 1	NOT USED BY NAVY
2-3	NOT USED
4-5	PACKING LIMIT
BIT 5 • 4	
• • • • •	
0 • 0	STANDARD
0 • 1	PACKED-2 DP
1 • 0	PACKED-2 SP
1 • 1	PACKED 4
6-9	LENGTH - NUMBER OF TADIL J WORDS IF FIXED FORMAT, OR FREE TEXT BLOCKS IN MSG. H
H	NOTE: MAXIMUM NUMBER OF FIXED FORMAT TADIL J WORDS: 4 MAXIMUM NUMBER OF FREE TEXT CODED TADIL J WORDS (WORDS 12-26): 1 (WORDS 27 TO 31 ARE UNUSED, SEE FIG I-VI) FREE TEXT UNCODED MESSAGES NOT USED DUE TO THE SIZE OF ITS MESSAGE BLOCK (SEE FIGURE I-III).
10-14	NPG NUMBER (INTERNAL)
15	CATALOG TYPE LOGIC 1 = NOT USED LOGIC 0 = TADIL J

WORD 4

<u>BIT</u>	<u>DESIGNATION</u>
0-1	SET FOR TRANSMISSION OF MESSAGE (XSET)
2-15	TIME SLOT FOR TRANSMISSION OF MESSAGE WITHIN THE NEXT HALF EPOCH: 0-16,383

WORD 5

<u>BIT</u>	<u>DESIGNATION</u>
0-15	PRIORITY OF MESSAGE HEX'4800' PRIORITY FOR INITIAL ENTRY HEX'4400' PRIORITY FOR REPROMS HEX'4000' PRIORITY FOR R/CS HEX'2800' PRIORITY FOR PAIRED SLOT RELAYS HEX'1400' PRIORITY FOR PPLIS HEX'1FFF' MAXIMUM PRIORITY FOR SICP MESSAGES

WORD 6

<u>BIT</u>	<u>DESIGNATION</u>
0-15	STALENESS LIMIT (1-65,535) TIME, IN SYSTEM TIME, (I.E.: TIME DERIVED FROM THE OPERATING SYSTEM) WHEN THE MESSAGE SHOULD BE DELETED FROM THE NPG QUEUE.

WORD 7

<u>BIT</u>	<u>DESIGNATION</u>
0-14	NUMBER OF SLOTS SINCE NAV DATA WAS VALID (0-32767)
15	EX = 1, EXTRAPOLATION REQUIRED

WORD 8

<u>BIT</u>	<u>DESIGNATION</u>
0-4	R/C CODE VALUES FROM 0 TO 31. IF ACTION = X010 ONLY (OR) RECURRENCE RATE (0-15)
5-8	HOP COUNT VALUES FROM 1 TO 15
9-10	REP NUMBER OF RETRANSMISSIONS REQUIRED (0-2)
11	NOT USED

WORD 8 (CONTINUED)

<u>BIT</u>	<u>DESIGNATION</u>
12-15	ACTION REQUIRED
BIT	15 • 14 • 13 • 12
	• • • • •
0 • 0 • 0 • 0	NO SPECIAL ACTION REQUIRED
0 • 0 • 0 • 1	R/C ORIGINAL MESSAGE (R/C 1,31)
0 • 0 • 1 • 0	R/C RESPONSE - R/C CODE AND CHECKSUM VALID
0 • 0 • 1 • 1	NOT USED
0 • 1 • 0 • 0	VMF REPROM RELAY-RR ONLY VALID
0 • 1 • 0 • 1	NOT USED
0 • 1 • 1 • 0	NOT USED
0 • 1 • 1 • 1	NOT USED
1 • X • X • X	(NON-VMF) REPROM REQUEST HOP COUNT AND RECURRENCE RATE VALID
• • • •	

WORDS 9 AND 10

32-BIT R/C CHECKSUM

WORD 11

<u>BIT</u>	<u>DESIGNATION</u>
0-14	STN
15	NOT USED

WORDS 12 THROUGH 16

1ST TADIL J CODE WORD (see Figure I-VI for format of coded Free Text Messages)

WORDS 17 THROUGH 21

2ND TADIL J CODE WORD

WORDS 22 THROUGH 26

3RD TADIL J CODE WORD (same format at 1st, 2nd, and 4th TADIL J code word)

WORDS 27 THROUGH 31

4TH TADIL J CODE WORD

80.1.6.1.3.3.3.4 Rapid Data Load Blocks to Follow Command. The format of the Rapid Data Load Blocks to Follow Command shall be as follows:

RAPID DATA LOAD BLOCKS TO FOLLOW COMMAND
(RESTART LOAD, USE CURRENT DATA)

	MSB										LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	0	1	1	0							1	1				
wd 2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
wd 3	1	0										BLOCK COUNT				
wd 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

∇ WORD 1 - CONTROL WORD

∇ WORD 2 - DATA WORD CODE

∇ WORD 3 - DATA

∇ WORD 4 - CONTROL WORD

RAPID DATA LOAD BLOCKS TO FOLLOW COMMAND
(RESTART LOAD, USE DEFAULTS)

	MSB										LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	0	1	1	0							1	1				
wd 2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
wd 3	1	1										BLOCK COUNT				
wd 4	0	0	0	0	0	0	0	0	0	0	0	PLATFORM ID				

∇ WORD 1 - CONTROL WORD

∇ WORD 2 - DATA WORD CODE

∇ WORD 3 - DATA

∇ WORD 4 - CONTROL WORD

THE INITIALIZATION DATA COMPLETE BLOCK SHALL BE SENT AT THE COMPLETION OF THE RAPID DATA LOAD.

80.1.6.1.3.3.3.5 Platform Identification From Panel. This block shall be utilized when inputting the platform ID to the SICP when this block is not the start of a rapid data load (platform identification as the start of a rapid data load is described in 80.1.6.1.3.3.3.4). The format of this block shall be identical to the "Restart Load, Use Defaults" block of 80.1.6.1.3.3.3.4 except that bit 0 of word 1 shall be LOGIC 1.

80.1.6.1.3.3.3.6 Rapid Data Load Blocks. The format of the Rapid Data Load Blocks shall be as specified in 80.1.6.

80.1.6.1.3.3.4 SACP Output Buffer Word Format. The following data block types shall be used when outputting data to the SACP output buffer:

- a. Data Request Response Block
- b. Received Message Block
- c. Message Transmitted Status

The format for the SACP output data buffer shall be as specified in Figure VIII-VI.

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	ONGOING STATUS WORD 1															
wd 2	ONGOING STATUS WORD 2															
wd 3	CONTROL WORD															
wd 4	ADDRESS WORD / DATA WORD CODE															
wd 5	DATA WORD															
wd 6	:															
wd 7	:															
wd 8	:															
wd 9	DATA WORD															
wd 10	CONTROL WORD															
wd 11	ADDRESS WORD / DATA WORD CODE															
wd 12	DATA WORD															
wd 13	:															
wd 14	:															
wd 15	:															
wd 16	DATA WORD															
wd 17	CONTROL WORD															
wd 18	ADDRESS WORD / DATA WORD CODE															
wd 19	DATA WORD															
wd 20	:															
wd 21	:															
wd 22	:															
wd 23	:															
wd 24	:															
wd 25	:															
wd 26	:															
wd 27	:															
wd 28	:															
wd 29	:															
wd 30	:															
wd 31	:															
wd 32	:															

FIGURE VIII-VI. SACP OUTPUT DATA BUFFER

THE FORMAT FOR THE ONGOING STATUS WORDS SHALL BE AS FOLLOWS:

MSB											LSB					
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	T S T F	T G	T E R M F	S D U A L	I P F F	D E G P R	T A C F	M F		H F	T O R D E	T O L D	B A T F	N I C P	S I C P	
wd 2	B I P	B L	D C	I D R	I C			N F S	N S		P I	B R	V T	B D R N V		

The bit designation shall be as follows:

WORD 1

<u>BIT</u>	<u>DESIGNATION</u>
0	NOT USED
1	SICP DEGRADED PERFORMANCE INDICATOR (SICP) LOGIC 1 = TIME OVERLOAD, NO INTERNAL BUFFERS, FLOATING POINT OVERFLOW, DIVIDE BY ZERO, OR NEGATIVE SQUARE ROOT HAS BEEN DETECTED IN THE SICP.
2	NICP DEGRADED PERFORMANCE INDICATOR (NICP) LOGIC 1 = TIME OVERLOAD, NO INTERNAL BUFFERS, FLOATING POINT OVERFLOW, DIVIDE BY ZERO, OR NEGATIVE SQUARE ROOT HAS BEEN DETECTED IN THE NICP.
3	BATTERY FAIL (BATF) LOGIC 1 = BATTERY UNIT HAS FAILED
4	THERMAL OVERLOAD (TOLD) LOGIC 1 = THERMAL OVERLOAD CONDITION EXISTS IN THE TERMINAL.
5	THERMAL OVERRIDE (TORDE) LOGIC 1 = TERMINAL IS OPERATING IN THE THERMAL OVERRIDE CONDITION.
6	HOST FAIL (HF) LOGIC 1 = INDICATES FAILURE OF HOST INTERFACE IN EITHER DIRECTION. NO COMMUNICATION WITH HOST IN LAST 12 SECONDS.
7	NOT USED

WORD 1 (CONTINUED)

<u>BIT</u>	<u>DESIGNATION</u>
8	MESSAGE FAIL (MF) LOGIC 1 = ONE OF THE FOLLOWING HAS OCCURRED IN THE LAST TWELVE SECONDS: NO MESSAGES RECEIVED; MOST MESSAGES RECEIVED IN ERROR, DEGRADED RTT XMIT PERFORMANCE
9	TACAN IU FAIL (TACF) LOGIC 1 = TACAN IU FAIL - <u>NAVY AIR ONLY</u>
10	DEGRADED PERFORMANCE (DEGPR) LOGIC 1 = DEGRADED PERFORMANCE (ANY BIT IN DEGRADED PERFORMANCE WORD OF STATUS BLOCK 8. SEE 40.12.15)
11	IPF FAIL (IPFF) LOGIC 1 = AN INTERFERENCE PROTECTION FAIL HAS BEEN DETECTED.
12	SDU ALERT (SDUAL) LOGIC 1 = AN SDU ALARM OR BAD VARIABLE HAS BEEN DETECTED.
13	TERMINAL FAIL (TERMF) LOGIC 1 = A DDP, R/T, IU, HPA, BATTERY, LOOPBACK, OR IPF FAIL HAS BEEN DETECTED.
14	TEST GO (TG) LOGIC 1 = MANUAL BIT IS COMPLETE AND ALL TESTS HAVE PASSED.
15	TEST FAIL (TSTF) LOGIC 1 = A WRA FAILURE, TERMINAL FAIL, SDU ALERT, IPF FAIL, OR DEGRADED PERFORMANCE HAS BEEN DETECTED. APPLIES ONLY TO MANUAL BIT AND COMES AT THE END OF WRA BIT.

WORD 2

<u>BIT</u>	<u>DESIGNATION</u>
0-1	NOT USED
2	BIT DATA RESULTS NOT VALID (BDRNV) LOGIC 1 = MANUAL BIT DATA RESULTS ARE NOT VALID SINCE A MOMENTARY TRANSMIT INHIBIT WAS ACTIVATED DURING THE MANUAL BIT PROCESS. - <u>NAVY AIR ONLY</u>
3	VALIDITY TEST IN PROGRESS (VT) LOGIC 1 = AN INITIALIZATION LOAD HAS BEEN RECEIVED BY THE TERMINAL AND DPG VALIDITY TESTING IS IN PROCESS.

WORD 2 (CONTINUED)BIT DESIGNATION

4 BIT REFUSAL (BR)
LOGIC 1 = A REQUEST FOR WRA BIT HAS BEEN REFUSED
SINCE LONG TERM TRANSMIT INHIBIT IS IN
EFFECT.

NOTE: ONCE THIS BIT HAS BEEN SET TO LOGIC 1, IT WILL NOT BE SET BACK TO
LOGIC 0, UNTIL A WRA BIT COMMAND HAS BEEN ACCEPTED BY THE IU (AT
THAT POINT, BIT 15 OF THIS WORD WILL BE SET TO LOGIC 1).

5 PLATFORM IDENTIFIER REQUESTED (PI)
LOGIC 1 = PLATFORM IDENTIFIER (BLOCK 0) REQUESTED

6 NOT USED

7 NO SYNC (NS)
LOGIC 1 = INITIALIZATION IS COMPLETE AND NET ENTRY
HAS BEEN INITIATED, BUT COARSE SYNC HAS
NOT BEEN ACHIEVED, I.E., THE FIRST NET
ENTRY MESSAGE HAS NOT YET BEEN RECEIVED.

8 NO FINE SYNC (NFS)
LOGIC 1 = COARSE SYNC HAS BEEN ACHIEVED, BUT FINE
SYNC HAS NOT YET BEEN ACHIEVED. TERMINAL
MAY TRANSMIT ONLY RTT MESSAGES PRIOR TO
FINE SYNC.

9-10 NOT USED

11 INITIALIZATION COMPLETE (IC)
LOGIC 1 = INITIALIZATION COMPLETE. INDICATED AFTER
LOAD COMPLETE COMMAND FROM INITIALIZATION
BLOCK 0, WORD 3 IS RECEIVED AND THE
INITIALIZATION DATA HAS BEEN LOADED AND
ACCEPTED.

12 INITIALIZATION DATA REQUIRED (IDR)
LOGIC 1 = INITIALIZATION DATA REQUIRED

13 DATA CONFLICT (DC)
LOGIC 1 = INITIALIZATION DATA IS IN CONFLICT WITH
DATA PREVIOUSLY RECEIVED OR A VALIDITY
ERROR IN THE INITIALIZATION LOAD HAS BEEN
FOUND.

14 BAD LOAD (BL)
LOGIC 1 = INITIALIZATION DATA LOAD RECEIVED IN
ERROR

15 BIT IN PROCESS (BIP)
LOGIC 1 = MANUAL BIT IN PROCESS

80.1.6.1.3.3.4.1 Data Request Response Blocks. Two types of Data Request Response Blocks shall be used by the SICP when responding to Data Request Commands from the SACP: the virtual or physical address response and the data word code response. The format of the virtual or physical address response shall be as follows:

DATA REQUEST RESPONSE BLOCK (VIRTUAL OR PHYSICAL ADDRESS)

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	ONGOING STATUS															
wd 2	ONGOING STATUS															
wd 3	0	0	ATS		AE					RT		WC				
wd 4	ADDRESS WORD															
wd 5	RESPONSE DATA															
:	:															

The format of the data word code request shall be as follows:

DATA REQUEST RESPONSE BLOCK (DATA WORD CODE)

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	ONGOING STATS															
wd 2	ONGOING STATUS															
wd 3	0	0	1								RT					
wd 4	DATA WORD CODE															
wd 5	RESPONSE DATA															
:	:															

80.1.6.1.3.3.4.2 Received Message Block. The format of the received message block shall be as follows:

MSB															LSB																	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																
wd 1	ONGOING STATUS																															
wd 2	ONGOING STATUS																															
wd 3	0	1											WORD COUNT																			
wd 4	XMIT NPG					RCV TAG				LBSTAT			ORIGINAL NO. VAL MSG																			
wd 5	CT			SAE NO.						TQSTAT																						
wd 6	TOA																															
wd 7	TOA																															
wd 8	TOTAL ERASURE COUNT											B ₁ STATUS																				
wd 9	CTP LCN						CTP CNTL			R C V A N T	D L B I		T / M	TYPE																		
wd 10		STN																														
wd 11	MESSAGE																															
:																																
wd N																																

∇ WORDS 9 THROUGH N - RECEIVED AND LOOPBACK MESSAGE (INCLUDING EITHER BLOCK ERROR OR BLOCK ERASURE COUNT)

∇ BLOCK IS TRUNCATED AT 32 WORDS WHEN MORE WORDS ARE AVAILABLE

The bit designation shall be as follows:

WORD 3

<u>BIT</u>	<u>DESIGNATION</u>
0-4	WORD COUNT (WC) THE NUMBER OF DATA WORDS ASSOCIATED WITH THIS CONTROL WORD
5-14	NOT USED
14-15	SET TO 01 BINARY

WORD 4

<u>BIT</u>	<u>DESIGNATION</u>
0-3	NUMBER OF VALID INITIAL WORDS RECEIVED (OR) NUMBER OF MESSAGES TRANSMITTED. (NOTE: THIS NUMBER IS VALID BEFORE SICP MESSAGE FILTERING)
4-6	STATUS OF LOOPBACK TRANSMISSION (LBSTAT)

BIT	6	•	5	•	4	
	•	•	•	•	•	•
	0	•	0	•	0	TRANSMITTED - NO ERRORS
	0	•	0	•	1	DECODE FAIL
	0	•	1	•	0	TOA COMPARISON FAIL
	0	•	1	•	1	NO LOOPBACK RECEIVED
	1	•	0	•	0	NOT USED
	•	•	•	•	•	
	1	•	1	•	1	

7-10	RECEIVED MESSAGE TAG (RCVTAG)
------	-------------------------------

BIT	10	•	9	•	8	•	7	
	•	•	•	•	•	•	•	•
	0	•	0	•	0	•	0	RECEIVED MESSAGE - NO
		•		•		•		ERRORS
	0	•	0	•	0	•	1	RECEIVED MSG - HEADER
		•		•		•		DECODE FAIL
	0	•	0	•	1	•	0	RECEIVED MSG - BLOCK ERRORS
	0	•	0	•	1	•	1	NOT USED
	0	•	1	•	0	•	0	RECEIVED MSG - DUPLICATE
	0	•	1	•	0	•	1	RECEIVED RTT REPLY /
		•		•		•		INTERROGATION LOOPBACK
	0	•	1	•	1	•	0	RECEIVED RTT INTERROGATION
		•		•		•		/ REPLY LOOPBACK
	0	•	1	•	1	•	1	NON-DECRYPTABLE PVM
	1	•	0	•	0	•	0	RECEIVED LOOPBACK
	1	•	0	•	0	•	1	NOT USED
	•	•	•	•	•	•	•	
	1	•	1	•	1	•	1	NOT USED

WORD 4 (CONTINUED)

<u>BIT</u>	<u>DESIGNATION</u>
11-15	TRANSMIT NPG ASSOCIATED WITH SLOT OF TRANSMISSION, (INTERNAL NPG, ASSIGNED BY THE NICP)

WORD 5

<u>BIT</u>	<u>DESIGNATION</u>
0-5	TRANSMISSION QUEUE STATUS (TQSTAT) - THE NUMBER OF SPACES AVAILABLE FOR MESSAGES (0-48; 49-63 NOT USED)
6-12	SAE NUMBER ASSOCIATED WITH THE SLOT OF RECEPTION/TRANSMISSION (64 INDICATES UNASSIGNED SLOT) (0-63; 65-127 NOT USED)
13-14	NOT USED
15	CATALOG TYPE LOGIC 1 = NOT USED LOGIC 0 = TADIL J

WORDS 6 AND 7

TOA REAL (see 4.1): NANoseconds

WORD 8

<u>BIT</u>	<u>DESIGNATION</u>
0-5	HEADER BLOCK ERROR FOR BLOCK 1(B1). FIELD DEFINITION IS AS PROVIDED IN 10.1.1.2.2.
6	NOT USED
7-15	TOTAL ERASURE COUNT OF RECEIVED MESSAGE

WORD 9

<u>BIT</u>	<u>DESIGNATION</u>
0-3	MESSAGE TYPE AND TYPE MODIFIER (TYPE & T/M). FIELD VALUES FOR VARIOUS MESSAGES ARE AS DEFINED IN 10.1.1.2.2.
4	NOT USED
5	DIGITAL LOOPBACK INDICATOR (DLBI) LOGIC 1 = NORMAL MODE LOGIC 0 = DIGITAL LOOPBACK MODE

WORD 9 (CONTINUED)

<u>BIT</u>	<u>DESIGNATION</u>
6	RECEIVE ANTENNA (RCV ANT) INDICATES AT WHICH ANTENNA THE MESSAGE WAS RECEIVED. LOGIC 1 = RECEIVED ON ANTB LOGIC 0 = RECEIVED ON ANTA
7	NOT USED
8-9	CTP CONTROL (CTP CNTL)
	BIT 9 . 8 0 . 0 RELAY TAG IS VALID 0 . 1 RELAY TAG IS NOT VALID, DEFAULT 1 . 0 DECODE FAILURE OCCURRED 1 . 1 BUFFER IS FULL
10	NOT USED
11-15	CYPHER TEXT PROCESSOR (CTP) BUFFER LOCATION (CTP LCN)

WORD 10

<u>BIT</u>	<u>DESIGNATION</u>
0-14	SOURCE TRACK NUMBER (STN) CONSISTS OF FIVE OCTAL DIGITS (00000 TO 77777)
	D D D D D 4 3 2 1 0 BITS 14,13,12 11,10,9 8,7,6 5,4,3 2,1,0 15 NOT USED

WORDS 11 THROUGH N

THE RECEIVED AND/OR LOOPBACK MESSAGE BLOCK INCLUDING: MESSAGE BODY,
AND EITHER BLOCK ERROR OR BLOCK ERASURE COUNTS.

80.1.6.1.3.3.4.3 Message Transmitted Status Block. The format of the Message Transmitted status block shall be as follows:

MSB															LSB	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
wd 1	ONGOING STATUS															
wd 2	ONGOING STATUS															
wd 3	1	0														
wd 4	V		R/C CODE									INTERNAL NPG				
wd 5	M STAT				SAMI											

The bit designation shall be as follows:

WORD 4

<u>BIT</u>	<u>DESIGNATION</u>
0-4	INTERNAL NPG (0-31)
5-8	NOT USED
9-13	R/C CODE
14	NOT USED
15	VALIDITY (V) LOGIC 1 = MESSAGE DATA VALID LOGIC 0 = MESSAGE DATA INVALID

WORD 5

<u>BIT</u>	<u>DESIGNATION</u>
0-11	SACP ASSIGNED MESSAGE ID (SAMI)
12-15	MESSAGE STATUS
BIT	15 • 14 • 13 • 12
	• • • • •
	0 • 0 • 0 • 0 TRANSMITTED WITHOUT • • • ERRORS
	0 • 0 • 0 • 1 TRANSMITTED WITH ERRORS
	0 • 0 • 1 • 0 MESSAGE DELETED SICP
	• • • BUFFER FULL
	0 • 0 • 1 • 1 MESSAGE DELETED
	• • • NON-SPECIFIC
	0 • 1 • 0 • 0 R/C RECEIVED
	0 • 1 • 0 • 1 NOT USED
	• • • • •
	1 • 1 • 1 • 1 NOT USED

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